

SILENT SLIPS, TRIPS AND BROKEN HIPS: THE RECOVERY EXPERIENCES
OF YOUNG ADULTS FOLLOWING AN ISOLATED FRACTURE OF THE
PROXIMAL FEMUR

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Abstract

Isolated hip fracture following a minor fall is a serious injury, normally requiring urgent surgical treatment and a complex recovery journey. Although commonly associated with the elderly, incidence and impact in adults under 60 years of age may be underestimated. The extensive literature almost exclusively focuses on the elderly, surgical interventions and relatively short-term outcomes. Young adults are also missing from the dominant societal discourse and healthcare policy on fragility hip fracture. They therefore represent a silent sub-subset of the fragility hip fracture population, whose recovery experiences and needs, particularly in the longer term, remain largely unknown.

A critical interpretivist approach and The Silences Framework (Serrant-Green, 2011), were used to 'give voice' to young adults with isolated hip fracture. Thirty participants, between one and ten years post injury, completed an in-depth, minimally structured interview in which they told their story of recovery. An inductive, thematic analysis was undertaken integrating Braun and Clarke (2006) and the four phase cyclical analysis of The Silences Framework (Serrant-Green, 2011). One cross-cutting theme: *Communication* emerged, together with four other main themes: *Experience of care*, *Impact on self*, *Impact on others* and *Moving forward*.

The findings indicated wide variation in the quality of care, often influenced by social and professional norms regarding hip fracture patient characteristics such as age and mode of injury. Multi-faceted, often long term, physical, social and psychological impact on participants, their family and wider social networks was also found. This included Post Traumatic Stress Disorder type symptoms and impact on work, finances and relationships. The study highlighted some limitations of the current hip fracture care pathway for supporting the specific recovery needs of young adults. It also identified some limited effectiveness of commonly used patient reported outcome measures for hip fracture in this young client group.

Exploring the recovery experiences of this under-represented group confirmed, but also altered the silences initially identified. Furthermore, it uncovered new silences which informed recommendations for future research; healthcare practice and policy. This study offers the first long term exploration of the impact of isolated hip fracture following a minor fall in young adults from their perspective. In doing so, it has also demonstrated the appropriateness of The Silences Framework (Serrant-Green, 2011) for guiding a person-centred, experience-based, acute orthopaedic/rehabilitation study undertaken by a student researcher.

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Operational Definitions

This section provides definitions for the key terms used throughout the study.

Isolated fracture of the proximal femur (hip fracture) – this includes any fracture of the proximal femur, including the femoral neck and trochanters. It does not include multiply injured individuals or those with other concurrent fractures.

Young adults - between 18 and 60 years of age

Older adults – more than 60 years of age

Minor fall – low energy/velocity fall as determined by height and speed

Height - a fall from standing or a height of 10 feet or less

Speed - approximately 15 miles per hour or less

Fragility fracture – broken bone resulting from low energy/velocity trauma

Introduction to the thesis

This chapter sets the scene for the study and provides an overview of the structure of the thesis. In doing so it outlines the aim and objectives of the study before introducing the conceptual framework that guided the research process and provided the structure for the following chapters. Operational definitions for the study will also be explored in this section.

i. Background

Despite a large body of knowledge regarding the causes, treatment and clinical outcomes of isolated fracture of the proximal femur (hip fracture) following minor trauma, very little is known about the patient experience of this injury or the recovery process. Even less is known about the experiences or care of adults under 60 years of age in this client group.

Given the high incidence of hip fracture in the elderly, it is not surprising the academic literature and healthcare policy and practice predominantly address this age group. However, it appears that the recovery experiences and needs of adults under 60, which may be quite different to those of elderly individuals with this injury, have not previously been explored and therefore warrant further investigation.

ii. Aim of the study

The aim of the study was to 'give voice' to the recovery experiences of young adults following an isolated hip fracture resulting from a minor fall.

The objectives were to:

1. explore and articulate the experiences of young adults following an isolated hip fracture resulting from a minor fall using a new research tool, The Silences Framework (Serrant-Green, 2011);
2. assess the effectiveness and appropriateness of healthcare delivery for these individuals;
3. identify the implications of (1) and (2) above for service improvement and care practice;
4. test The Silences Framework (Serrant-Green, 2011), for researching sensitive issues or the health care needs of marginalised or under-represented groups, in a new context.

iii. Antecedents to the study

As Serrant-Green (2011) suggests can be the case, pragmatic and professional choices led to this study being undertaken at this particular time. It evolved as a consequence of personal experience of isolated hip fracture at a relatively young age following a minor fall. My decision to undertake the study had two points of

origin. The first arose from my own recovery experience as I realised that younger people with hip fracture did not feature in the dominant healthcare practice, academic or social discourses regarding this injury. The second was the discovery of a new research framework, The Silences Framework (Serrant-Green, 2011), specifically designed for researching marginalised or under-researched groups.

iv. Marginalisation and under-representation

Serrant-Green (2011, p347) defines Screaming Silences (hereafter termed 'silences') as:

'...areas of research and experience which are little researched, understood or silenced'.

Common concepts on which marginalisation discourses are based concern power and privilege in relation to characteristics such as ethnicity, sexuality or age for example. With reference to ex-offenders, Blessett and Pryor (2013) argue that marginalisation refers to a process by which individuals find themselves at the edge of society in a health, economic or political sense. Young people sustaining an isolated hip fracture following a minor fall may not immediately spring to mind as marginalised in the same way as other groups in society. I argue here however, that the experiences and views of young adults with a fragility hip fracture may inadvertently be marginalised and unheard as a result of the dominant societal and professional discourses regarding hip fracture. Factors contributing to this are their relatively small numbers; relatively low incidence of post-operative complications and co-morbidities; and being perceived as less vulnerable because of relative youth.

This has contributed to the current, almost total focus in the literature and healthcare practice debates, on fragility fracture in the elderly or hip fracture in the multiply injured patient following major trauma. This positions isolated hip fracture in the under 60s as outside the accepted societal and healthcare practice norms or social script. As a result this group is without recourse to societal, policy and professional structures through which to have their voice heard and specific needs identified and met. I therefore contend that these factors, together with over stretched healthcare services struggling to meet financial deficits, have forced young people with isolated hip fracture to the margins of healthcare as they have not been identified as having specific health needs requiring tailored services (Thomas and Hebenton, 2013).

Young individuals with isolated hip fracture are therefore marginalised as a result of omission, rather than commission as might be more the case for other groups in society. This may partly be the result of age related health stereotypes which are based on individual and societal norms regarding the incidence and impact of hip fracture following minor injury.

v. Introducing The Silences Framework

Originally developed from research exploring ethnicity, gender and sexual health decision-making, The Silences Framework (Serrant-Green, 2011) had not been subsequently tested in other contexts. It was however potentially applicable to other topics and healthcare groups. Derived from anti-essentialist viewpoints

which hold that reality is constructed and contextual (Williams and May, 1996), this framework emphasises that multiple perspectives and personal experience are valued in the construction of knowledge. This is particularly so for 'voices' that are missing from the dominant discourse, having been poorly understood, actively silenced or under represented for other reasons (Serrant-Green, 2011).

In addition, the person-centred, experience based focus of The Silences Framework (Serrant-Green, 2011) and its recognition of the importance of what is left unsaid by participants during the research process were of relevance to this young hip fracture study. This was particularly because the study sought to explore recovery experiences from the individual's perspective by enabling participants to control the data collection process as much as possible. This framework therefore provided the theoretical underpinning for an experience based design, to enable exploration of and learning from the recovery experiences of young adults following an isolated hip fracture. This type of approach is also considered appropriate when little is known of the topic under examination (Parahoo, 2006), as was the case in this study.

Designed to guide the research process from conceptualisation of the research question through to the research outputs, The Silences Framework (Serrant-Green, 2011) comprises five stages. The thesis will therefore be structured around these stages:

- Stage 1: Working in Silences

- Stage 2: Hearing Silences
- Stage 3: Voicing Silences
- Stage 4: Working with Silences
- Stage 5: Planning for Silences

Stage 1: ‘Working in Silences’ contextualises the study by exploring existing knowledge regarding the research subject itself and the characteristics of the situation in which the research takes place. This stage of the research therefore comprises Chapter 1 of the thesis.

Stage 2: ‘Hearing Silences’ identifies the silences, or areas of research/experiences that are little understood, researched or valued. Recognising the dynamic and interdependent relationship between the researcher, the study participants and the subject of the study, this stage requires the researcher to expose and reflect upon the silences inherent in *this researcher* conducting *this study at this time*. Therefore, how this stage of The Framework informed the methodology and study design is discussed in Chapter 2.

Stage 3: ‘Voicing Silences’ comprises the data collection and analysis phase of the research. It is designed to ensure the silences identified in Stage 2 are explored and analysed in context and from the perspectives of key stakeholders in the research to arrive at the final study outputs. This includes a particular

emphasis on service user and public perspectives. Chapter 3 therefore outlines the research methods and data analysis processes. This includes details of how the four phase, cyclical data analysis process required by The Silences Framework's (Serrant-Green, 2011) was integrated with Braun and Clarke's (2006) thematic analysis framework to arrive at the study findings. This chapter also explores the relevant ethical considerations and steps taken to maximise the credibility and trustworthiness of the study. The second part of Stage 3 concerns the findings from this analysis. Chapter 4 therefore presents the final study outputs.

Stage 4: 'Working with Silences', addresses the discussion aspects of the study. The primary aim of this stage is to ensure critical reflection on any practical gains and theoretical contribution arising from the study. Chapter 5 therefore revisits the original study aim. It also includes detailed reflection on the practical gains arising from the study in terms of future healthcare provision for young adults with an isolated fracture of the proximal femur following a minor fall and the study's contribution to the furtherance of silences research. This includes a particular emphasis on how the researcher and *Collective Voices* i.e. service user and wider social networks of study participants have impacted on the study and the final outputs. How the original silences identified might have changed as a result of the study, those that remain unchanged and any new silences identified from the study findings are also addressed in this chapter.

In keeping with the recognition of the contextualised nature of knowledge underpinning The Silences Framework (Serrant-Green, 2011), this stage requires

consideration of these issues with reference to the contextual matters identified in Stage 1. It also requires consideration of the effect of the study on this context and any future research using this framework. Recommendations arising from the research and the implications of this study for further research and healthcare practice and policy regarding this client group are therefore also examined in this section.

Stage 5: 'Planning for Silences' is the final stage of The Framework. This stage is not applicable for all studies but is particularly relevant for applied research in which the study outputs require action planning for service delivery or community action (Serrant-Green, 2011). As the aim of this study sought to explore the implications of the findings for future service delivery and care practice rather than necessarily to change practice at this time this final stage of The Framework was not applied.

The underpinning criticalist philosophy of The Silences Framework fitted well with the study aim to enable the individual perspectives of young people following isolated hip fracture which are currently under-represented and therefore marginalised in the academic literature, to be heard. Serrant-Green (2011) also welcomed further research to test the applicability of The Silences Framework in practice and different contexts. Using this framework therefore provided an opportunity for the study to contribute to the development of silences research more widely. As a result the framework was used to guide the study from initial concept and design through to the final outputs and recommendations.

vi. Summary

This section has provided an introduction to the aim and objectives of the study. It has also introduced the theoretical framework underpinning the research and providing the structure for the resulting thesis. In addition, key concepts of relevance to the study have been defined. Chapter 1 builds on this, by providing a more detailed, critical analysis of the wider context for the study.

Chapter 1

Stage 1: Working in Silences (Setting the context)

1.1 Introduction to the chapter

Stage 1 of The Silences Framework (Serrant-Green, 2011), Working in Silences, emphasises the situated nature of human experience and research which seeks to understand and make sense of this. This chapter therefore, provides the context for the study and its focus on young adults' experiences of isolated fracture of the proximal femur (hip) following minor trauma. This is based on the structured search detailed in section 1.2 and critical review of the literature which is presented in section 1.3 and comprises six sections:

- 1.3.1 Hip fracture incidence
- 1.3.2 Healthcare policy context
- 1.3.3 Person-centred healthcare
- 1.3.4 Hip fracture surveillance
- 1.3.5 Hip fracture causes and patient characteristics
- 1.3.6 Evaluation of treatment outcomes

The chapter concludes by considering the potential gains from undertaking this study at this time.

1.2 Search strategy

A search of the literature was undertaken to situate the young hip fracture study within the context of the current body of knowledge. The search strategy primarily comprised electronic database searching but also included a 'snowball' approach (Garrard, 2014), following up references and citations within key papers (Higgins and Green, 2011).

The database search included major international healthcare science databases i.e. Medline, Cinahl, AMED, PsychInfo and Embase. These were selected as they incorporated a large range of relevant international journals and offered appropriate coverage of the topics and concepts of relevance to the study. A systematic database search was undertaken using a range of key words, synonyms and phrases which were combined using the Boolean operators of 'AND' and 'OR' to expand and narrow the searches as appropriate. Truncation and 'wildcard' symbols e.g. "orthop#edic*" were used to maximise retrieval of all derivations of the search terms. These were based on: hip fracture surgery/internal fixation, falls, low velocity injury, patient stories, patient experience and outcome assessment, rehabilitation and recovery, quality of life, quality of care, and middle age (45-64 years).

The initial search was undertaken on 11th November 2011 and refreshed on 27th November 2015. Duplicates were deleted then the results filtered to remove those with no perceived relevance to the study. A decision to include/exclude papers

was based on reading the title, abstract and/or full text as relevant. Interrogation of the grey literature, not formally published in traditional academic sources (Higgins and Green, 2011) was also completed. This was achieved by searching relevant websites such as Department of Health, NHS England, NHS Improving Quality and King's Fund which provided the policy context and relevant information published outside the research literature. Citation searching was also undertaken from key papers until no relevant new sources were identified and familiarity with the research field or 'owning the literature' as described by Garrard (2014) was judged to have been achieved. This combined search strategy was undertaken because it is more comprehensive and produces more reliable results than database searching only (Greenhalgh and Peacock, 2005). The resulting papers formed the basis of this chapter which informed the study aim and design.

1.3 Literature review

1.3.1 Hip fracture incidence

The term hip fracture is generally used to refer to all fractures of the proximal femur (Archibald, 2003). This is a serious injury (van Balen et al, 2003) which is often a sudden, traumatic event (Proctor et al, 2008), poses a threat to life (Olsson et al, 2007) and is:

'...strongly analogous to myocardial infarction – a catastrophic sentinel event causing major secondary prevention implications.' (Partridge and Marsh, 2007, p122).

Thus, hip fracture is a common, well-defined condition that threatens functional status and leaves patients feeling vulnerable (Olsson et al, 2007; Proctor et al, 2008, Morse and O'Brien, 1995). It is characterised by a complex recovery journey (Currie and Hutchinson, 2005), requiring treatment from a multidisciplinary team and often involving a long hospital stay (Visschedijk et al, 2010; Gunasekera et al, 2010). It therefore represents one of the most important causes of morbidity and mortality worldwide (Santamaria et al, 2003).

Based on quantitative analysis of the 2004/5 Scottish Hip Fracture audit data, Holt et al (2009) claim hip fracture places a significant burden on acute and community healthcare services. It is associated with a dramatic increase in healthcare consumption (Leigheb et al, 2013) and the cost to the UK is approximately £2billion annually (NICE, 2011). Thus the impact of hip fracture on the healthcare budget (Mitchell et al, 2010), individuals and wider society (Cameron et al, 2001) is considerable.

The term 'fragility fracture' is used to describe a fracture resulting from low-energy injury i.e. a fall from standing height (Oetgen et al, 2009; Chesser et al, 2011) and represents one of the biggest challenges of the 21st Century (Parsons et al, 2014). Cooper et al (2011) reported extensive variation in incidence worldwide although estimates vary widely. Similarly, there are conflicting reports on incidence trends. For example Lofman et al (2002), reporting on the over 50s found an unexpected trend of increasing hip fracture incidence in men and a reduction in women, within an increasing incidence overall in one Swedish county over a 15 year period. A

much bigger study in the USA by Nieves et al (2010) however, based on national hospital discharge data for the over 50s covering a 10 year period, reported no evidence of increasing incidence of any femoral fracture.

Nevertheless, demographic trends and an ageing population are expected to fuel rising incidence in future (Holt et al, 2009) resulting in a consensus that hip fracture is likely to become more prevalent (Cummings and Melton III, 2002; Pownall, 2004; Currie and Hutchinson, 2005). Australia and New Zealand Hip Fracture Registry (2012) highlighted the increased risk of age-related hip fracture the upcoming retirement of 450 million baby boomers alone is likely to present. Reginster et al (2001) however found that only 3% of a 30% rise in the incidence of hip fracture in Belgium over a 12 year period was attributable to demographic changes such as ageing. Furthermore, Holt et al (2008a) found that although only 18% of the Scottish population were in the 50-64 age-group they accounted for 13% of all hip fractures and therefore represented an important sub-group.

The UK has one of the highest hip fracture rates in Europe (Mitchell et al, 2010). In England, of approximately 40,000 hip fractures in the under 65s caused by an accident each year between 2001/2 and 2011/12, around 1500 were in the under 50s (Khundakar, 2013). This is a relatively rare injury in young adults who therefore represent a small subset of all hip fractures in the under 65s each year. It nevertheless has potentially devastating effects on the individuals concerned and their families (Schiller et al, 2015; Young and Resnick, 2009; Vilardo and Shah, 2011) and is associated with increased use of healthcare resources for treatment

and rehabilitation (Gunasekera et al, 2010; Holt et al, 2009). Importantly, these individuals are of working age meaning the potential social and economic implications of hip fracture in this group, both at the societal and individual level, are profound (Holt et al, 2008a).

Over 20 years ago Boden et al (1990) noted that the significance of hip fracture in young people may be underestimated. In addition, other public health trends which increase the risk of hip fracture in younger individuals mean the incidence of this injury at a younger age may be likely to rise considerably. The rising incidence of osteoporosis, which is reaching epidemic proportions worldwide (WHO, 2003) is one such trend, with hip fracture identified as one of the most devastating complications of osteoporosis (Vanaecht et el, 2012) at both population and individual level (Cumming et al, 1997). This has resulted in more activity and research addressing osteoporotic related fractures, although there is still work to do (Mitchell et al, 2010).

Importantly, there are also positive influences which may reduce the incidence and burden of hip fracture thereby counterbalancing the impact of predicted increases (Holt et al, 2009). These include advances in surgical treatment and technology, better pharmaceutical treatment of osteoporosis and falls prevention and reduced mortality and length of hospital stay. More research is needed to determine the actual impact of improved patient management on outcomes however (Melton III et al, 2009) and this study seeks to contribute by exploring the impact of participants' care experiences on their recovery.

1.3.2 Healthcare policy context

Despite a number of major reorganisations since 1948 when the NHS began, continuous quality improvement has been a key strategic priority for health and social care services since the 1990s. Further reinforced by the Quality Improvement Productivity and Prevention (QIPP) initiative (Gabriel, 2012) health and social care in the UK has recently undergone a further decade of intense reform (Darzi, 2008; DH, 2010a). This continues apace with the recent 2012-13 major reorganisation of the commissioning and delivery of health and social care services (DH, 2012a) followed in rapid succession by the testing of new models of service delivery (DH, 2014a; NHS England, 2015).

These strategic reforms are the latest response to a wide range of societal factors in the UK including: an ageing population, unhealthy lifestyles, increasingly complex health needs, new treatments and technological advances, changing public expectations and rising demand for services (DH, 2014a). Holt et al (2009) specifically identified the need for an increase in acute orthopaedic care capacity and a review of hip fracture care models in response to these societal trends.

Trauma is already the commonest cause of death in the under 40s in England and Wales and life years lost through premature death and disability following injury is predicted to be the 2nd highest globally by 2020 (TARN, 2016). Perhaps not surprisingly however the recently established UK Trauma Audit and Research Network (TARN) addresses the most seriously injured individuals who present with multiple, life threatening injuries. Young adults with an isolated hip fracture

following a minor fall are therefore not its focus, being more likely to survive and generally needing less complex interventions.

This healthcare context has been further compounded by economic recession following the global financial markets collapse of 2008, the subsequent UK Major Spending Reviews (HM Treasury, 2010; 2015) and associated austerity measures in the UK. Estimates indicate a £30 billion healthcare funding shortfall (DH, 2014a), thus the NHS is striving to deliver safe, relevant and effective services to increasingly expectant patients, public and Government, with fewer resources (Mitchell et al, 2010).

This is against the backdrop of unacceptable variation in the quality of healthcare, some of which has not met the minimum standard for quality and safety (CQC, 2010). New entrants to the healthcare sector emerged following the introduction of 'any qualified provider' in 2012 (BMA, 2013) which aimed to drive down costs whilst increasing quality through choice and competition. These include social enterprises as well as private and voluntary organisation providers. Everyone Counts (NHS Commissioning Board, 2013) set out how patient-centred improvements would be made through joint planning between NHS Commissioning boards, Clinical Commissioning Groups, Health and Well-being Boards and other related agencies. This was in support of the policy aim to put patients at the heart of healthcare commissioning and service delivery. The NHS Constitution for England (DH, 2013) included the mandate to work together for the

benefit of patients and ensure people have a positive experience of healthcare became a key performance priority for the NHS (DH, 2014b).

Thus, this young hip fracture study was undertaken within a healthcare policy context of a long history of multifaceted reforms aimed at enhancing the quality of care but specifically constrained by more recent fiscal pressures.

1.3.3 Person centred healthcare

Providing choice for patients has been a policy aim of successive governments since the 1970s. The benefits of patient and public involvement in health and social care service design and delivery have now been recognised (Campbell et al, 2010) following renewed recent emphasis on this (Lammy, 2003; DH, 2005a). Increasing, acknowledgement of the value of the patient viewpoint has resulted in policy designed to enhance patients' ability to inform strategic decision-making. This includes the commissioning of healthcare services (DH, 2010b). As a result users of health care services and the general public have at least greater potential influence on services: through for example, local and national user and carer forums and formal strategic developments. These include the health and social care consumer champion body HealthWatch (DH, 2011). This is in addition to patient and public membership of strategic decision-making bodies such as Foundation Trust boards, Primary Care Trust Executive Committees and Clinical Commissioning Groups.

The urgency of putting patients first and giving them a voice was highlighted very recently by the catastrophic failings outlined by Lord Laming (2009), DH (2012b), Francis (2013) and the subsequent Berwick Report (2013) and Keogh Review (2013) which sought to address the issues such inquiries raised. The NHS Constitution was subsequently strengthened in 2015 and is explicitly based on the principle that the patient must be at centre of everything the NHS does. One of the values this is built on is that nobody should be discriminated against or excluded from care and it includes a pledge that all patients have the right to:

‘...receive care and treatment that is appropriate to you, meets your needs and reflects your preferences.’ (p6).

Francis (2013) made it clear that a significant factor in the failings identified was a refusal to listen to and put patients at the centre of healthcare. The recently updated code of professional practice for nurses and midwives (NMC, 2015) emphasises the nurse’s role in putting people first, challenging discriminatory attitudes toward those receiving care, acting as an advocate for the vulnerable and gathering feedback from a range of sources to enhance care. In addition, new requirements for the revalidation of healthcare professionals include mandatory service user feedback (GMC, 2013; Peate, 2013). This should serve to further enable patient voices to be heard and help rebuild public confidence in those who care for them. These changes also begin to redress the loss of power experienced by the individual when the person behind the illness is omitted from the care (Bishop and Cregan, 2015).

This is by no means a 'fait-accompli' however but still a 'work in progress'. For example, a Royal College of Gynaecologists (RCOG) Working party report in 2012 reported that whilst approximately 90% of the Consultants polled agreed that the majority of women were generally satisfied with the care they received, just over 50% of women themselves said they were happy with their medical treatment and the way in which staff cared for them. Although potentially the result of many factors, this illustrates one example of disparity between patient and healthcare professional perspectives. Such dissonance highlights the importance of considering both patient and professional perspectives on recovery outcomes and the increasing demand for research which takes account of the patient perspective identified by Gregory (2010). This is particularly important given the heterogeneous nature of the hip fracture population and associated wide variation of needs previously reported (e.g. Eastwood et al, 2002; Parker, 2004). These studies support earlier research by Swiontowski et al (1984) identifying the need to evaluate low velocity hip fracture injuries separate to those caused by high velocity trauma.

Historically the success or failure of orthopaedic interventions was determined and reported by surgeons not the patients (Ashby et al, 2009). There is therefore great potential for individual patients to play a more integral role within healthcare processes. This could enable their views to feed into service provision on a more routine basis to optimise patient outcomes and satisfaction with care (Edwards, 2002) and is crucial because empowered patients cope better with recovery (DH, 2001). Similarly, the increased self-efficacy resulting from greater perceived control by individuals who are involved in their rehabilitation results in better

treatment outcomes and should therefore be promoted (Jones et al, 2000; Lerner, 2005).

A convenience sample study of 62 hip fracture patients over 65 years of age using open-ended questions (Young and Resnick, 2009) reported that despite being key players in the recovery process, patients did not have the opportunity to contribute their ideas about what was most helpful for recovery up to a year post surgery. They therefore called for more research on the functional recovery process from the patient's perspective. Ashby et al (2009) claimed more recent emphasis on patient centred reporting and quality of life assessment. There remains a dearth of studies exploring the patient perspective on isolated hip fracture (Clancy et al, 2015) however; which a consecutive annual cohort study of 644 hip fracture patients aged 20 years and over by Hansson et al (2015) found concerns much more than the traditional orthopaedic approach. Compassion in Practice (DH, 2012c), a national strategy based on person-centred values known as the 'six Cs': compassion, caring, courage, competence, communication and commitment was designed to embed a culture of compassionate caring by nursing, midwifery and healthcare staff. This young hip fracture study specifically addresses one of the actions identified in this strategy, namely the call to do more to assess the experience of patients, making sure their voice is heard (DH, 2012c).

1.3.4 Hip fracture surveillance

Whilst recognising that hip fracture predominantly occurs in later life, average age 83 years (HQIP, 2014), the relevant NICE (2011) guidance addresses the whole age spectrum, stating that:

‘...treatment and care should take into account patients’ needs and preferences.’ (p6).

Despite this however, the National Hip Fracture Database (for England, Wales, NI and the Channel Islands) only records hip fractures in people aged 60 and over. The database was established in response to the major public health threat of osteoporosis and fragility fractures to older people (Partridge and Marsh, 2007); and on the basis that hip fractures in the under 60s were either the result of high impact injury or other underlying bone disorders and predisposing health conditions (Plant, 2010).

Wide variations still exist in the quality of hip fracture care despite improvement since implementing the National Hip Fracture Database to audit care according to national standards (Patel et al, 2013). Although it has the largest prospective patient database in the world (Gunasekera et al, 2010), the UK is behind other countries in the scope of its hip fracture surveillance. Scandinavian countries have the highest incidence of hip fracture in the world (Rohde et al, 2008) and Norway is reported to have a higher incidence of hip fracture than any other country (Sorbye and Grue, 2013). The Norwegian hip fracture register, established in

2005, mirrors England however, only recording the 60s and over (Gjertsen et al, 2008).

In contrast, unlike the English register on which it was based, the Scottish hip fracture register includes all hip fracture patients aged 50 and over at injury (Gunasekera et al, 2010). Although only established in 2011 and still developing, the Australia and New Zealand registry has even more comprehensive recording and reporting in terms of age at injury as it includes all hip fractures in patients aged 40 and over (Australia and New Zealand Hip Fracture Registry, 2012). Thus other nations have established more comprehensive recording of hip fractures in young adults than the UK. This potentially gives them better age-related incidence data. Over time this should add to the body of knowledge for the under 60s which is currently limited by the scope of the national surveillance data available.

1.3.5 Hip fracture causes and patient characteristics

There is consensus in the literature that increased hip fracture risk is correlated with increasing age. Despite most research using 18 or 20 years of age as the lower age limit, there is little consensus in the literature on the upper age used to define 'young' or 'early' hip fracture.

Although varying from study to study, 60 or 65 years of age tends to be used as the upper age parameter for inclusion/exclusion when studying hip fracture in younger patients e.g. Karantana et al (2011). Some studies e.g. Leavy et al (2013)

and Nieves et al (2010) however have used the lower age of 50 years and over when studying fragility fracture. A small number of recent authors, for example Al-Ani et al (2013), go further, differentiating between younger groups by defining participants aged 50-69 years as middle-aged and those 20-49 years of age as young. Verettas et al (2002) however note that age 50 is a somewhat arbitrary dividing line after which fractures of the proximal femur in women particularly may be attributable to post-menopausal osteoporosis. In one of very few studies specifically addressing hip fracture in young people, Protzman and Burkhalter (1976) justified their 20-40 years of age inclusion criteria based on the femur being physiologically mature but without physiological atrophy during this age span. Nevertheless, the use of different age-related parameters for defining young hip fracture patients makes direct comparison of relevant studies and their findings difficult.

Based on national hospital survey discharge data on the over 50s spanning a 10 year period to 2006, Nieves et al (2010) reported an exponential increase in fragility fracture associated with increasing age. This predominantly affected women and was therefore commonly associated with osteoporosis. Similarly Banks et al (2009) undertook a statistical analysis of over half a million women who were followed up for an average of more than six years per woman, although there were too few participants of pre-menopausal age to make valid pre and post menopause comparisons. A comparative, cross-sectional, matched control study including 97 hip fracture patients aged 50 and above by Rohde et al (2008), characterised hip fracture patients as older with complex underlying conditions. This was based on an almost three times greater incidence of osteoporosis, a

lower bone mass index, and more frequent co-morbidities compared to controls. Fragility fracture often signals underlying ill health (Chesser et al, 2011), but the picture is complex. Based on an analysis of the Scottish Hip Fracture Data from 1998-2005 and patients over 50 years of age, Holt et al (2008b) reported statistically significant gender differences with men exhibiting greater pre-fracture co-morbidities than women despite being younger at the time of injury. In a further small hermeneutic study of six patients, Clancy et al (2015) identified gender differences in the focus and nature of elderly hip fracture patients' recovery narratives and recommended further research to explore these.

There is consensus in the literature (Swiontowski et al, 1984; Rohde et al 2008; Karantana et al, 2011) that lifestyle factors such as smoking and high alcohol intake have a strong influence on the incidence of 'early' hip fracture. However whilst Al – Ani et al (2013) support these previous findings regarding the increased fracture risk associated with predisposing lifestyle factors they also contradict the commonly accepted view regarding the high prevalence of underlying co-morbidities in the under 50s. This was because most of their participants aged 50 or less were in good health. This prospective study of 185 patients did just use self-report measures, although these were validated and commonly used tools for evaluating hip fracture outcomes (Parsons et al, 2014).

There have been few studies specifically concerning young adults with isolated hip fracture. This is perhaps not surprising as it is a more uncommon injury in young people (Thuan and Swiontkowski, 2008). However over time, these studies (see

for example: Protzman and Burkhalter, 1976; Swiontkowski et al, 1984; Thuan and Swiontkowski, 2008) have consistently reported the cause of fracture as high velocity trauma such as a road traffic accident or fall from a great height, resulting in multiple injuries and poor prognosis as the incidence of non-union and avascular necrosis is high. Robinson et al (1995) concur, reporting specifically that hip fracture in people 20-40 years of age most commonly occurred in men after high-energy trauma. This evidence was further confirmed by a retrospective study of 74 fractures of the proximal femur in the under 50s (Verettas et al, 2002).

Verettas et al (2002) however also reported that approximately a third of fractures (n=24) were the result of low energy trauma such as a simple fall. They did not however explore or report on potential underlying causes for these low energy, fragility fractures in this young patient group. In addition, a prospective study of 185 patients from four healthcare centres (Al-Ani et al, 2013) further highlighted the potential impact of low energy trauma in the under 50s. These authors reported that 80% of all fractures in this age group were the result of low energy trauma such as a fall from the same level, cycling or ice-skating. These two studies therefore specifically challenge the commonly held view that hip fracture in the under 50s is necessarily the result of high velocity injury.

Specifically focusing on females, a high quality study using a robust data set and audit process (Karantana et al, 2011), reported that fractures in women of working age (i.e. under 65years) following a simple fall are a result of pathophysiology. This reflected similar findings by Holt et al (2008a) in the 40-65s and the accepted

view that osteoporotic type fractures are the main cause of isolated hip fracture in the under 65s (NICE, 2011). Court-Brown and Caesar (2006) suggested the epidemiology of hip fractures is changing rapidly. They identified 8 fracture curves, two of which involved predominantly younger people and indicated considerably more osteoporotic fractures than had previously been thought. This is particularly important in light of Karantana et al's (2011) finding that the first significant increase in age-related hip fracture in women was at 45 years of age, a full five years before osteoporosis screening begins in most areas. To put this in perspective, there are 13million women aged over 45 years of age in the UK which represents one fifth of the total population (BMC, 2011). In addition, mortality in younger women with hip fracture was found to be 46 times the background mortality of the female population (Karantana et al, 2011).

Although almost exclusively focusing on the elderly therefore not necessarily transferable to younger individuals, a number of studies have implicated vitamin D deficiency and/or secondary parathyroidism as increasing the risk of hip fracture. For example, Oetgen et al (2009) found that most of the 30 people with low-energy hip fracture studied exhibited metabolic abnormalities associated with low bone density such as low levels of vitamin D (53%) and secondary hyperparathyroidism (83%). Aspray (2013) has since noted that the role of vitamin D in hip fracture risk assessment has been acknowledged.

Bone density appraisal is a recognised requirement of post hip fracture care (NICE, 2011). Oetgen et al (2009) however, argued that endocrine assessment

should be added to this because metabolic abnormalities were found to be poorly correlated with bone density measurements. This could be one reason why current bone mineral density levels may contribute to an under-estimate of fracture risk for some patients (Aspray, 2013). Even this recommendation though focuses on post-fracture treatment and secondary prevention, thus limiting the potential for reducing preventable fractures using primary prevention interventions.

1.3.6 Evaluation of treatment outcomes

Hip fracture outcome studies were categorised into three groups by Young and Resnick (2009). The first group concern clinical research, for example comparing surgical treatments and specific functional outcomes. These were not the main focus of this review as they did not seek to address patient experience of care. The second group comprise epidemiological studies, exploring prevalence, mortality and disability rates; and the final group are defined as outcome evaluation studies focusing on functional recovery, health status, socio-demographics and social support.

Hip fracture can result in a dramatic change to the individual's life situation (Ziden et al, 2008). Perhaps not surprisingly there is therefore a large literature on fragility hip fracture outcomes although this predominantly focuses on the elderly and relatively short term outcomes i.e. up to one year post injury. Healthcare policy contributes to this relative short-term-ism. For example, one NHS Outcomes Framework (DH, 2014b) domain concerns helping people recover from injury and improving the proportion of patients who recover previous levels of mobility.

Walking ability after fragility fracture is an associated priority area, however the metrics used to assess and report on this are relatively short-term i.e. 30 and 120 days. In addition, the latest drive for quality improvement in hip fracture care focuses on financial incentives for NHS Trusts who meet six quality measures for each patient. However all but two of these measures are acute care focused, further reinforcing acute/short-term outcome measurement. These are: falls and rehabilitation assessment; and osteoporosis and fracture prevention assessment.

Epidemiologic and outcome evaluation studies have enhanced understanding of functional recovery and associated outcomes post hip fracture (Young and Resnick, 2009) although functional and physiological outcomes are still most commonly evaluated (Santamaria et al, 2003; Bertram et al, 2011). Examples include: mortality (Eastwood et al, 2002; Australia and New Zealand Hip Fracture Registry, 2012; Holt et al, 2009; Holt et al, 2008a; Holt et al, 2008b); institutionalisation or place of residence post-injury (Eastwood et al, 2002; Holt et al, 2008a; Holt et al, 2008b; Australia and New Zealand Hip Fracture Registry , 2012; Ariza-Vega, 2014; Castellini et al, 2015); length of hospital stay (Holt et al, 2008a; Holt et al, 2008b; Holt et al, 2009; Australia and New Zealand Hip Fracture Registry, 2012; Castellini et al, 2015); further falls (Australia and New Zealand Hip Fracture Registry, 2012; Hansson et al, 2015); mobility (Hansson et al, 2015; Kondo et al, 2014; Ariza-Vega, 2014; Holt et al, 2008a; Holt et al, 2008b; Eastwood et al, 2002; Griffiths et al, 2015); and re-operation rates (Gjertsen et al, 2011).

Whilst these are important outcome measures, they may not provide the best reflection of holistic outcome for the young hip fracture population who are less likely to experience these sequelae due to the generally higher levels of self-efficacy and pre-injury general health. Thus the heterogeneous nature of the hip fracture population, complex recovery pathway and contextual nature of impact, have led to calls for differentiated evaluation of outcomes by for example, mode of injury, surgical procedure and context/quality of life issues. This could enable specifically targeted interventions to be developed (Eastwood et al, 2002; Montin et al, 2002).

Following a structured review of the literature Bertram et al (2011) found there had been gross underestimation of long term disability post hip fracture. In discussing the revised World Health Organisation International Classification of Impairments, Disabilities and Handicaps (WHO-ICIDH2) and its emphasis on personal context, Wade (2000) offers a simple definition of disability as an: '*...alteration in activities...*' (p115). Bertram et al (2011) found that determining long term disability following hip fracture was not straightforward, but estimated that 29% of hip fractures result in long-term disability.

There is a consensus that no single Patient Reported Outcome Measure (PROM) could evaluate the quality of care for all hip fracture patients, see for example Griffiths et al (2015) and Moppett et al (2012a). Widely accepted, validated and commonly used PROMs for evaluating hip fracture outcomes and informing hip fracture care include the Oxford Hip Score (OHS) and the EQ-5D. The OHS was

introduced in 1996 to quantify disability arising from hip arthrosis, or degenerative joint disease and EQ-5D is a generic quality of life measure covering health domains that hip fracture patients consider important such as mobility and usual activities, self-care, anxiety and pain (Parsons et al, 2014). Such tools are often used in conjunction with each other to capture more comprehensive, patient self-assessment information. There is little evidence however of a response to a call over a decade ago from Parker (2004) to think more unconventionally about outcome measures for hip fracture patients.

Despite being a small study of 10 patients over 50 years of age with osteoarthritis of the hip rather than traumatic injury, Oberg et al (2005) reported that an unstructured interview with the patient could not be replaced by any of three commonly used outcome measurement instruments. This conclusion was drawn from a comparison study of three instruments widely used in physiotherapy and occupational therapy treatment planning and follow-up (i.e. SF-36 -self-reported health-related quality of life, FAS -an instrument for evaluation of lower extremity dysfunction and COPM - for evaluation of self-experienced activity level) with an unstructured interview. Their justification for this conclusion was that listening to patients can prevent information being missed that is important to them but does not fit with professional structures or specific treatment.

Similarly, Vilardo and Shah (2011) reported that patient care following hip replacement could be enhanced by adopting a biopsychosocial model of care. This should routinely include patient reported outcome measures (PROMs) which

take into account psychological and social rather than just physical factors as is traditionally the case. However, care must be taken with this approach as the call for routine use of PROMs to be designed specifically for a particular disease or part of the body may still not address the issues highlighted by Oberg et al (2005) above.

A study of the psychological challenges faced by patients with new disability or during recovery from major illness (Larner, 2005), argued these factors were considered vague and difficult to negotiate and were therefore neglected by medical approaches. Similarly, although specifically focusing on elderly patients Proctor et al (2008), later claimed there was still relatively little known of the impact of psychological factors on hip fracture recovery and rehabilitation. Furthermore, Leonardsson et al (2010) highlighted the importance of acknowledging the significance of hip fracture from the patient perspective, particularly in terms of longer term functional outcomes and quality of life. Isolating the impact of health conditions developed following the injury from that of the hip fracture itself however is a difficult challenge in longer-term studies (Bertram et al, 2011).

One study of elderly patients attempted to focus on quality of life impact from the patients' perspective by studying their experience of hip fracture (Archibald, 2003). It identified four specific phases, namely the injury, pain, recovery and disability experiences. Similarly, a small study of the over 60s' experiences of the very early recovery phase i.e. 5-10 days post operatively following total hip replacement or internal fixation of a traumatic hip fracture under local anaesthetic, argued that

healthcare professionals need to listen to patient perspectives in order to deliver patient centred care (Mauleon et al, 2007). This finding supported previous research which explored the experiences of total hip replacement patients aged 22 to 79 years of age and concluded it is important to know what patients themselves consider to be the most important aspects of care (Montin et al, 2002). In addition, although focusing on functional capacity following hip replacement, Oberg et al (2005) identified listening to patients as crucial because it has the potential to provide key information to inform care that is not always captured using more quantitative methods. In one of the only studies of its kind identified, a narrative case study of a 60 year old lady presented her experience of hip fracture in her own voice rather than as a medical account of the experience, to support service improvement (Pownall, 2004).

Olsson et al (2007) highlighted the patient benefits of having their reflections listened to. This is particularly important when they are vulnerable, the hip fracture posing as it does, a fundamental threat to their life position. Although focusing on major trauma survivors, a study using unstructured interviews to explore their recovery experiences reported the therapeutic effect the process of reflecting on their accident and recovery experiences had on individuals. This effect manifest in sense-making stages which together represented the overarching concept of 'preserving self' (Morse and O'Brien, 1995). The strategies for achieving self-preservation moved from an initial phase of shutting down and taking time out, through enduring i.e. learning to bear treatments, to striving to regain and redefine self as a disabled person.

Young adults of working age commonly have other responsibilities or social expectations so the potential social and economic implications of hip fracture in this group are profound (Holt et al, 2008a). Bertram et al's (2011) claim regarding the previous underestimation of the long term disability associated with hip fracture supported a previous retrospective study of 60 hip fracture patients under 50 years of age (Verettas et al, 2002). Their participants were followed up for over a year and reported long term absence from work and disability as a result of reduced hip joint function post treatment. This negative picture was challenged however by some reported examples of patients experiencing positive social change, the injury having prompted a return to rather than loss of roles and activities, which represented a change for the better (Montin et al, 2002).

Patients experiencing health issues at a younger age than commonly expected is not limited to fragility fracture. Cerebrovascular accident is a health condition that like hip fracture was more associated with old age until recently. This has resulted in a knowledge gap regarding younger adults with this condition. For example, Ellis-Hill et al (2008) found the psychological and social processes underpinning young stroke patients' recovery and rehabilitation experiences which had hitherto received little attention, led to different agendas for patients and healthcare professionals. This was despite young stroke victims having different rehabilitation needs to elderly patients with the same condition (Roding et al, 2003). Similarly, the benefits to mesothelioma patients of telling their stories and the typical focus of research on the physical needs of this patient group have also been identified. Based on in-depth interviews exploring the lived experience of these individuals and their families Hughes and Arber (2008) reported unrecognised and therefore

unmet psychological needs. These included the additional challenges associated with pursuing a legal claim for compensation and a sense of social isolation, wanting to meet others in a similar situation. The importance of personal context for successful rehabilitation and the need to move beyond the traditional, mechanistic focus on visible impairments to more emphasis on the psychological and social aspects of illness and disability was recognised by the WHO ICID-2 definition of disability (Wade, 2000).

Pain is very commonly reported as a patient outcome following hip fracture. In research such as Archibald (2003), a phenomenological study using unstructured interviews with five elderly patients following fragility fracture, the pain experience focused on acute pain immediately post injury and whilst in the trauma unit. Although referring to patients' post-discharge experiences, this paper did not indicate how long after the injury participants were interviewed which may account for the relatively short-term patient outcomes reported. Nevertheless, patient focus on pain post injury and in the early stages of recovery was confirmed by Olsson et al (2007) whose participants recounted the pre-surgery period as filled with fear and pain.

A number of other studies however report more enduring pain as a hip fracture outcome. Unexplained, chronic pain in some patients following hip replacement was identified by Vilardo and Shah (2011) as an overlooked issue causing distress, substantial loss of function and productivity in society. Similarly, over 30 years ago, Swiontowski et al (1984) reported young hip fracture patients

experiencing mild to moderate pain and loss of function up to three years post-surgery. Enduring pain as a commonly reported symptom was also reported following an extensive literature review which found that 47% of hip fracture patients reported pain one or more years post fracture, 26% of which was moderate to severe (Bertram et al, 2011). In addition, a survey of patients, averaging two years post-surgery reported that pain was one of the greatest difficulties faced following sub-acute care (Kondo et al, 2014).

Foss et al (2009) recommended that future studies of postoperative pain and rehabilitation after hip fracture surgery should stratify individuals according to surgical procedure as they found pain levels were highest following common internal fixation procedures such as Dynamic Hip Screw (DHS) and Intra Medullary Hip Screw (IMHS). This finding was supported by Kondo et al (2014) in their study of elderly patients, which found more fracture related pain post discharge in patients following compression screw internal fixation compared to hip replacement surgery. Despite a higher incidence of femoral head necrosis and non-union in younger people (Verettas et al, 2002) and the serious consequences associated with these complications, Thuan and Swiotowski (2008) reported good functional outcome in hip fracture patients under 50 years of age who achieve a healed femoral neck fracture uncomplicated by avascular necrosis. As a result, hip replacement is generally avoided wherever possible in this group due to their higher activity levels and need of the replacement joint for the longer term (Thuan and Swiontkowski, 2008).

However, a further study by Leonardsson et al (2010) comparing long-term patient outcomes following hip replacement versus internal fixation in a randomised study of 450 patients over ten years found internal fixation did not give better functional advantage or pain relief than joint replacement. This supported Foss et al's (2009) call for evaluation of outcome by specific patient sub-groups within the broader hip fracture population. Foss et al (2009) reinforced previous findings from Gjertson et al (2008) who, based on data from the first two years of the Norwegian hip fracture register, recommended research be conducted on different groups within the broader hip fracture population to explore issues such as pain and quality of life and improve the quality of the treatment provided. It also supported an earlier recommendation by Swiontskowi et al (1984) that femoral neck fractures associated with multiple trauma should be evaluated separately to those associated with metabolic factors such as osteopenia or osteoporosis.

Substantial reduction in mobility that may never be regained is a commonly reported sequela of hip fracture in the elderly. However the impact of reduced mobility on young patients is also important and widely reported. Mobility is closely connected to issues of pain and an individual's ability to undertake usual daily activities to maintain personal independence at all ages. For example, elderly patients reported outcomes such as regaining mobility and the ability to undertake common daily activities such as toileting and hygiene as very important (Archibald, 2003). Similarly, Kondo et al (2014) and a prospective cohort study of 159 patients by Ariza-Vega et al (2014) in the over 65s, found that limited mobility affecting moving, sitting and standing created difficulty with activities of daily living. The greatest problem identified by patients however was regaining the ability to walk.

Having studied patients across the age range Bertram et al (2011) reported that although participants were mostly over 50 years of age, 42% of patients in the 25 studies they reviewed, had not regained pre-fracture mobility levels a year post injury. This indicates the extended impact of hip fracture on mobility even for young people. The impact of reduced mobility on activities of daily living such as shopping was also reported by Bertram et al (2011). Furthermore, Flikweert et al (2014), based on a clinical trial testing a new multidisciplinary hip fracture care pathway with 401 participants aged 60 and over, reported a strong negative effect of hip fracture on activities of daily living and quality of life. Griffiths et al (2015) found that although ability to walk was important, other leg movements were also needed for activities like gardening or using transport to enable effective functioning.

Although referring to the elderly, Ziden et al (2008) described hip fracture as a '*life-breaking event*' because of the multidimensional consequences the injury had on participants:

'...the fracture seemed not only to break the bone but also to cause social and existential cracks...' (p801)

as a result of its profound psychological and social impact which acute healthcare does not currently take sufficiently into account, particularly in the early post injury period. Martin-Martin (2014) confirmed this view reporting that self-perception and quality of life impact have been less explored.

A range of physical and psychosocial enablers of recovery have been reported in the literature. Intensive rehabilitation is required to enable hip fracture patients to return to pre-injury quality of life (Pownall, 2004). Young and Resnick (2009) found that in engaging with rehabilitation, patients listen to and take account of professional advice, are positive about recovery overall and demonstrate resilience. In addition, patient actions such as: seeking help (Schiller et al, 2015) and determination and maintaining perspective (Young and Resnick, 2009) were also found to support recovery. However Wade (2000) identifies the emphasis of rehabilitation on function, patient behaviour and activities as too mechanistic, focusing mainly on visible impairments and less on the psychological needs of individuals.

Patients being informed of the process and pace of rehabilitation is essential (Proctor et al, 2008) and rehabilitation should be tailored to the individual. However a lack of adjustment for young patients with different rehabilitation needs was identified by Roding et al (2003). In addition, Eastwood et al (2002) called for research focusing on post discharge and longer-term recovery as some young people in their cluster analysis of 571 hip fracture patients over 50 years of age had poorer outcomes six months post fracture.

Although patient determination and positive staff attitudes were reported as important enablers (Young and Resnick, 2009) the same study also identified the need for more social support and physiotherapy post discharge. Hansson et al (2015) confirmed these findings, reporting the need for more physiotherapy

following discharge from hospital. Roding et al (2003) called for more involvement of families in the rehabilitation process because of the impact this had on them. The support of friends and families was important (Young and Resnick, 2009) but families found recovery challenging (Schiller et al, 2015) and did not always understand less visible sequelae such as fatigue (Roding et al, 2003). A randomised controlled trial involving 122, non-cognitively impaired hip fracture patients found that adding an Occupational Therapy (OT) intervention to conventional physiotherapy treatment could help to reduce some of the family and social costs of hip fracture as patients become more independent (Martin-Martin et al, 2014).

In summary, the increasing incidence of osteoporosis and very considerable burden of fragility hip fracture in the elderly is now receiving significant attention. However, despite a very large body of knowledge regarding the causes, treatment and clinical outcomes of isolated hip fracture following low energy trauma, very little is known of the patient experience of this injury or the provision of patient centred information regarding the process and outcomes of recovery. Furthermore there remains an explicit assumption that hip fractures in the under 60s, are normally the result of high impact trauma, underlying health conditions or lifestyle factors. This has resulted in a dearth of research on low velocity hip fracture in young adults. In addition, outcomes, particularly in the longer term and the care experiences of young adults with this diagnosis have been minimally addressed. Given the high incidence of this injury in the elderly, it is not surprising that the literature predominantly addresses this age group. However, it appears that the recovery experiences and expectations of young adults, which may be quite

different to those of elderly individuals with fragility fracture, have not previously been sufficiently explored.

Therefore, despite the changing aetiology of fragility fractures, potential increased incidence of this injury in middle age in future and UK healthcare policy regarding listening to and involving patients, the recovery experiences of the client group this study seeks to explore have not been specifically addressed. Young adults with isolated hip fracture are therefore currently a 'silent subset' of the broader hip fracture population, inadvertently marginalised and relatively unheard, warranting further investigation.

1.4 Potential gains from the study

There are potential gains from undertaking the young hip fracture study in three main areas. First, by enabling an under-represented group to have their voice heard the study has the potential to contribute to silences research. This could help to address the current gap in the body of knowledge regarding the longer term impact of fragility fracture and resulting health outcomes in young people. Second, the study is an example of a person centred approach to care and the research that underpins this, which is currently a key healthcare policy aim. As a result, the learning from the study could be used to enhance the future quality of care for such individuals. Finally, the study provides an opportunity to test a new research framework, The Silences Framework (Serrant-Green, 2011) in an acute

healthcare rehabilitation context. This is a setting in which this framework has not previously been applied.

1.5 Chapter summary

Young adults with fragility hip fracture are presently a 'silent subset' of the broader hip fracture population which is commonly conceptualised as comprising the elderly, multiply-injured individuals following high velocity trauma, or people with other predisposing conditions such as osteoporosis or alcoholism. In addition: the relative rarity of this injury in young adults; their typically uncomplicated recovery as measured by commonly used outcome measures and metrics; and their under-representation in the academic literature and healthcare policy, mean the healthcare experiences and needs of young adults with isolated hip fracture following minor trauma have not been specifically addressed. This study therefore represents an opportunity to 'give voice' to these under-represented and under-researched patient experiences, using a new research framework specifically developed for such purposes. Relevant findings may then be used by policy makers and healthcare providers to maximise recovery for this group. This is particularly important as the NHS strives to deliver safe, relevant and effective services to increasingly expectant patients, public and a government with fewer resources.

Chapter 2

Stage 2: Hearing Silences (Methodology and methods)

2.1 Introduction to the chapter

As identified in the previous chapter, the experiences of young adults under 60 years of age with an isolated fracture of the proximal femur following a minor fall are mostly missing from the dominant academic, policy, societal and healthcare practice discourses. Thus the aim and objectives of this study were to:

Study aim: Give voice to the recovery experiences of young adults following an isolated hip fracture resulting from a minor fall;

Study objectives:

1. To explore and articulate the experiences of young adults following an isolated hip fracture following a minor fall using a new research tool, The Silences Framework (Serrant-Green, 2011);
2. To assess the effectiveness and appropriateness of healthcare delivery for these individuals;
3. To identify the implications of (1) and (2) above for service improvement and care practice;
4. To test The Silences Framework (Serrant-Green, 2011), for researching sensitive issues or the health care needs of marginalised or under-represented groups, in a new context.

This chapter therefore justifies the philosophy underpinning the study and choice of The Silences Framework (Serrant-Green, 2011) as the theoretical framework on which it is based. It also outlines the application of this framework in guiding the research design. The purpose of this is to enable others to step into the study (Serrant-Green, 2011) by:

‘...exposing the thinking and decision pathways through which the ‘Silences’ addressed were located and made explicit, while acknowledging that the researcher was the conduit through which these uncovered Silences were heard, identified and prioritised.’ (Esharehuri et al 2015, p223-224).

Issues of researcher identity and the potential researcher influences inherent in the study will therefore be explored here. Addressing these issues is crucial, as the researcher is considered the primary listener in the study whose experiences, thought processes and pragmatic decisions underpin and potentially impact on the research. Therefore, where appropriate the first person is used to describe the research process. The situated context of the research and acknowledgement of the researcher’s role in the process is in keeping with the underpinning methodology for the study and The Silences Framework (Serrant-Green, 2011) guiding it. This chapter also identifies the specific aspects of the research topic that render it under researched. The silences resulting from the ‘missing voices’ of the study participants, which in this case are the under researched and therefore marginalised perspectives of young adults post isolated hip fracture, are also explored in this chapter.

Many alternative and well-established methodologies could have been used to guide this study. The Silences Framework (Serrant-Green, 2011) was chosen because it fitted theoretically and my personal and professional values. It was attractive to me as a novice researcher because it provided a clear, easy to follow structure to guide the research process. The phased, cyclical nature of the framework also reminded me of the Nursing Process with which I was very familiar. It therefore offered the potential to draw on my transferable, professional nursing knowledge and skills in undertaking the research. Most importantly, it was also specifically designed to support research with silent voices and marginalised groups which fit well with the study aims and made it appropriate choice to guide this study. Grounded Theory is one example of the alternative methodologies considered. However, whilst the naturalistic, open-ended data collection and inductive analysis that are characteristic of this approach were relevant, its focus on the development of theory (Strauss-and Corbin, 1998) did not fit the purpose of this study. The Silences Framework (Serrant-Green, 2011) however offered the flexibility to use the open-ended, flexible and inductive approaches identified above within it: an approach not uncommon in qualitative research (Charmaz, 2011).

2.2 An interpretive, criticalist approach

The most fundamental level at which research can be described or examined is in terms of the philosophical assumptions on which it is based. Clark (1998) noted that nursing research studies in particular, seldom articulate or debate these assumptions. This is despite the significant implications they have for the practicalities of conducting research and interpreting the findings (Robson, 2011;

Guba and Lincoln, 2004). However, more recently Mills et al (2007) claim researchers are more cognisant of their ontological and epistemological beliefs when formulating questions and selecting methodology.

The paradigm, or:

‘...basic belief system or world view that guides the investigator...in fundamental ways...’ (Guba and Lincoln, 2004, p17)

represents the philosophical premises upon which a research study is based. These include assumptions regarding the nature of the world which underpin the ontology (i.e. assumptions about what can be known about that world) and subsequently the epistemology (i.e. the nature of the relationship between the knower and what can be known) (Grix, 2002) and the methodology (i.e. approach to generating that knowledge) of any research (White and Dotson, 2010). Grix (2002) proposes a directional relationship between these three elements, beginning with ontology, arguing that a particular view of the world affects the whole research process. However where we stand in the world influences what we see and whilst perspective is determined in part by the individual, much is related to other factors such as societal, cultural and other background influences. Scholars from a participatory and interpretive paradigm contend it is impossible or unproductive to make these influences irrelevant, rather that they should be acknowledged and brought into the research (Green and Thorogood, 2014).

There are still fundamental differences of opinion regarding whether or not the social sciences should pursue the same goals of explanation, generalisation and prediction that characterise the physical sciences (Williams and May, 1996) which view researcher and participants as independent entities, biases and values as threats to a study (White and Dotson, 2010). Positivist and post-positivist approaches have characterised much nursing research, due largely to the dominance and status of the medical model of disease which places little emphasis on patient experience (Clarke, 1998; Polit and Beck, 2008); although this is now changing (Gregory, 2010). Over time, taken for granted tenets of science and reason such as distance and objectivity have been reassessed (Coffey, 1999), challenged and rejected by researchers, who take a more interpretivist philosophical stance. For example, Denzin and Lincoln (1994) note the failure of post-positivism to satisfactorily address issues such as the value-laden nature of facts, the interactive nature of inquiry and the potential for the same 'facts' to support more than one theory. In addition, Clark (1998) argues that continued pursuit of generalisable theories risks losing the individual in the general and represents an:

'...overly reductionist view of the person in the quest for universal mechanistic rules which are culturally independent' (p 1245).

Nothing can ever really be totally objective; interpretation is never absent and there is no neutral position (Hollis, 1994). Coffey (1999) supports this view, claiming that social research can never be neutral or 'hygienic' but must take account of the existing cultural and structural contexts in which it is situated. This is at the heart of the argument that human action differs from phenomena in the

natural world and cannot be conceptualised in the same way. As Stake (1995) notes, the function of research is:

‘... not necessarily to map and conquer the world but to sophisticate our beholding of it.’ (p43)

This is a post-modern, interpretivist stance that underpins the aim of this hip fracture study. This approach is based on an anti-essentialist ontology. This arises from an idealist philosophical perspective, which contends that the foundations of knowledge are variable and consist of our ideas about the world rather than the world itself. As a result, interpretive approaches reject the notion of objective truth (Clark, 1998), arguing that all knowledge is:

‘...grounded in human society, situated, partial, local, temporal and historically specific.’ (Coffey, 1999, p11).

These approaches therefore assume that although mediated universally in some ways, people create personal, subjective meanings resulting from interaction with the surrounding world. As suggested by Williams and May (1996):

‘...the world we see around us is a creation of the mind...’ (p59).

Interpretivists argue that people, unlike phenomena in the natural sciences, interpret the world through human cognition (Grix, 2002). This recognition of the importance of individual perception (Williams and May, 1996) means that

interpretivist researchers can take seriously participants' accounts as attempts to make behaviour meaningful to others and the person themselves.

This approach fits with my experience as a healthcare professional, for example in the responses of different individuals to the same injury or illness and the social nature of health and healthcare during which the patient and their illness/injury 'interact' with multiple social agents. These include healthcare professionals and members of multiple social networks such as family and friends, work and wider society. Thus, in emphasising the contested and contextual nature of knowledge and its creation, an interpretivist approach seeks instead to understand the subjective meanings people construct in order to create knowledge. This approach is therefore congruent with the aims of this study, which seeks to explore the experiences of young individuals with an isolated hip fracture.

Furthermore, the act of participating in research using an interpretivist approach can be therapeutic for the participant as this process of recounting experiences helps them make sense of these (Morse and O'Brien 1995, Colbourne and Sque, 2005). Hollis (1994) emphasises the importance of context arguing that individuals have social constraints or obligations that cannot be explained by reference to the individual alone, arguing further that the social world must be seen from within first. In this young hip fracture study, one way of achieving this was to enable the social world to be seen from the perspective of the individual experiencing the injury and with reference to their social networks. This was particularly important as little is known about the recovery experiences of this group. An interpretive

approach was therefore more likely to provide an understanding of what the experience meant for young adults with hip fracture and their extended social networks.

An interpretivist approach to the meaning of truth and generation of valid knowledge is also congruent with current healthcare policy and public rhetoric. This highlights the importance of person-centred care, consumer experience and service user involvement in care and healthcare research (NICE, 2011; Lammy, 2003; DH, 2005a, Campbell et al, 2010). Furthermore, interpretivist approaches have been proposed as one way of 'giving voice' to people (Pownall, 2004) whom authors such as Gregory (2010) argue have previously been silenced by the predominance of the medical model and associated positivist/post positivist research philosophies.

An advantage of interpretivism is that it can utilise the previous experience of the researcher. However, researcher/participant reciprocity can also be a disadvantage as the researcher may influence the research process and/or findings and therefore needs to be aware of their own impact. Coffey (1999) calls for the researcher to strike a balance between 'strangeness' and 'familiarity'; arguing that a failure to reflect on, recognise and critically engage with a range of issues regarding place, position and identity is more problematic than over familiarity. For example in this study, the perceived identity of the researcher from her own and participant perspectives i.e. as researcher, healthcare practitioner and patient, had to be considered (Ballinger and Payne, 2000). This issue is

crucial, can be challenging for researchers using interpretivist approaches and requires a high degree of reflexivity throughout (Gregory 2010).

This issue of researcher impact is one aspect of potential bias that can be a criticism of interpretivist research. However, White and Dotson (2010) argue that the effect of bias depends on whose interests it serves. For example it may be positive if it reveals important aspects of a phenomenon that would not be seen from other perspectives but negative if it obscures more than it reveals. This belies an anti-essentialist view of reality which holds that there are multiple 'truths', each dependent on the perspective adopted. There is therefore a need to appreciate the meaning ascribed to events by the individuals concerned (Lincoln et al, 2011). For this study, the aim was to redress the current imbalance in the academic, policy, social and healthcare practice discourses regarding patient experience of this injury in favour of the patient perspective. As Ashby et al (2009) note, historically patient outcomes and the success of orthopaedic interventions have been measured by surgeons although there is now an increasing emphasis on patient-centred evaluation including patient assessed quality of life, which this study aims to support.

A further criticism of interpretivist approaches is that participant realities/narratives are prone to revision and re-interpretation over time. However, this is characteristic of the contextual nature of this approach which does not recognise or aim to discover a fixed reality from which generalisations can be made to other contexts or populations. This study did not aim to generalise to the whole of the young hip

fracture population although this does not preclude the possibility of some transferability. The findings may provide a useful basis for exploratory comparison with other groups. Groleau et al (2009) have previously demonstrated the relevance of a multi-stage qualitative study design that views participants as experts in the experience studied and incorporates validation of the findings by members of their wider social networks as is the aim of this study,

In conclusion, although an initial literature review revealed very limited evidence regarding this particular client group, what was available reflected a predominantly positivist/post-positivist paradigm. This is perhaps not surprising as isolated hip fracture under 60 years of age following a minor fall is relatively uncommon and healthcare research continues to be dominated by scientific approaches, although this is changing. Whilst interpretivism is not a panacea, adopting this approach to exploring the experiences of young adults with hip fracture could most usefully add to the current evidence base.

The elements of interpretivism are also key features of criticalist perspectives. A critical perspective was appropriate for the study because of its focus on the importance of context, advocacy, and post structuralist ideas such that humans can at least in part determine their existence (Denzin and Lincoln, 1994). This view is congruent with my professional experience as a nurse and healthcare academic, as well as the professional and personal values which underpin these roles. These include the right to self-determination, the importance of partnership and democracy and the co-creation of knowledge. Aiming to understand and 'give

voice' to patient experiences is congruent with an interpretive and inductive approach (Doucet and Mauthner, 2008).

In addition, my aim to undertake research that could potentially enhance future patient experience, through advocacy and enabling change, reflects a criticalist perspective (Denzin and Lincoln, 1994). Critical theory is based on the premise that the interests of all individuals should be identified and accepted rather than those of a few dominating the rest (Dant, 2003). Dant (2003) further argues that this can be achieved and these individuals empowered without similarly restricting or oppressing others. This emancipatory and action focus, together with a recognition of multiple realities and the value determined nature of enquiry fit well with the aims of the study to 'give voice' to the experiences of a currently silent, under-researched patient group for the purposes of enhancing future healthcare provision.

Critical theory however is only one of a range of criticalist approaches. Other examples focus on specific groups or stances, for example: gender and feminist, gay rights or sexuality studies; ethnicity and race studies. Nevertheless four core elements unite all criticalist perspectives. These are:

1. the contextual and interpretive nature of knowledge and inquiry
2. issues of power and marginalisation
3. advocacy and action

4. the role of the researcher as part of the research process

The emphasis of criticalist perspectives on the emancipation of oppressed groups or those marginalised in other ways is appropriate for the young hip fracture population. Although these individuals are not commonly conceptualised as oppressed, I argue they are marginalised by omission i.e. inadequate identification of the needs of this specific sub-set of the larger patient group. Given the increasing pressures on healthcare services identified in Chapter 1 however, there may also be a general professional or societal reluctance to explore and potentially uncover additional unmet needs. Once surfaced, they would need to be addressed potentially further challenging already stretched healthcare resources. Therefore the study was undertaken from within the critical interpretivist paradigm and used a qualitative approach.

2.3 Application of The Silences Framework

The Silences Framework (Serrant-Green, 2011), requires the researcher to address three specific issues when introducing the study. These are: researcher identity, the nature of the research subject and the study participants. The purpose of this is to enable the reader to 'hear' the silences the research seeks to explore. This requirement reflects the contextual and value laden nature of enquiry based on the criticalist perspectives that underpin The Silences Framework (Serrant-Green, 2011) and the study.

2.3.1 Researcher Identity

Kincheloe and McLaren (2008) emphasise the need for qualitative researchers using a criticalist perspective to be aware of:

‘...his or her position in the web of reality....and the ways they shape the production and interpretation of knowledge.’ (p421)

which they term ‘*self-conscious criticism*’ (p406). This highlights the key issues of researcher identity and positionality within the research process.

Qualitative research involves a complex interaction between the researcher and the subject in which the researcher’s relationship with participants and the research process influences the findings (Pelias, 2011). Thus my role within the research was subject to the same critical scrutiny as the research itself (Arber, 2006). I must therefore account for my personal characteristics and perspective to enable readers to assess the effect of these on the research process and results (Alasuutari, 2004). This required a conscious, continuous placing of self within the research through simultaneously examining my own social identity as well as that of the study population (Serrant-Green, 2002).

This concept is termed positionality and concerns the status of the researcher in relation to the research. An etic or outsider perspective represents a detached, analytic pursuit of generalisability (Green and Thorogood, 2014) and is a key feature of the still dominant positivist, empirical approach to the generation of knowledge (Kahuna, 2000). An emic or insider perspective suggests a subjective,

informed and influential standpoint or study in which the researcher is deeply situated and invested (Kahuna, 2000) and aims to make: ‘...*interpretive rendering from the inside*’ (Charmaz, 2004, p980). A researcher adopting an emic or insider perspective therefore claims cultural membership of the group being studied (Pelias, 2011) or areas of shared identity with participants (Doucet and Mauthner, 2008) but aims to remain faithful to participants’ own priorities and the research frameworks used to ensure validity (Green and Thorogood, 2014). Not surprisingly, therefore it was anthropology from which the concept of emic or insider perspectives and much of the associated literature is derived (Kahuna, 2000).

Researcher positionality is commonly discussed in the literature as a clear distinction between etic (outsider) and emic (insider) perspectives (Doucet and Mauthner, 2008; Huberman and Miles, 2002). Some scholars warn against this binary distinction arguing instead that etic and emic perspectives are two ends of a positionality continuum along which researchers move back and forth during the research process in a dynamic, continuous way (Arber, 2006; Serrant-Green, 2002; Kahuna, 2000). Conceiving of researcher positionality as shifting and malleable creates methodological problems for:

‘...*maintaining a productive balance between insider/outsider in making the familiar “strange”*’ (Green and Thorogood, 2014, p158).

This explains the significant tensions and personal challenges that researchers report such as when insider/outsider identities ‘collide’ causing an ‘identity crisis’

(Arber, 2006). This crisis can occur as the researcher seeks to balance involvement and detachment whilst pursuing what is considered the optimum position of 'marginal positioning' on the insider/outsider boundaries (Kahuna, 2000). Corbin–Dwyer and Buckle (2009) recognise the insider/outsider dichotomy but rather than propose the continuum view, argue that a dialectic relationship that is not dichotomous or absolute. They suggest it is the 'silence' or space between these two opposites that offers a 'dwelling place' for the researcher enabling her to occupy both positions.

Positionality is dependent upon perspective however. It is not only affected by conscious awareness and the researcher positioning herself but also by the way she is positioned by others (Arber, 2006). This included study participants, gatekeepers and other collaborators in the research, adding further complexity. Thus addressing issues of positionality and researcher identity or stance required reflexivity throughout the planning and execution of the research to ensure my assumptions and other 'baggage' were recognised and made explicit (Asselin, 2003), to produce a more trustworthy and honest account (Pelias, 2011).

Reflexivity is a complex, multi-faceted and much discussed topic (Alvesson and Skoldberg, 2009). For the purposes of this discussion reflexivity is defined as: '*...reflexive monitoring of action...*' (Alasuutari, 2004, p26). However, I would add that the reflexive process undertaken in this study also included consideration of the factors underpinning those actions and my identity as a researcher. These included personal values, experiences and assumptions.

Personal reflection on the antecedents of this study highlighted a range of complex, interrelated factors that impacted on my decision to undertake this study at this particular time using the chosen approach. Serrant-Green (2011) suggests that the researcher must first identify and then conceptualise the silence. In this case the silence became apparent as a result of my own injury experience and accidental identification of a gap in the evidence during my own recovery journey. This was my own 'Screaming Silence' which once heard could not be unheard and was difficult to ignore. I subsequently conceptualised the study from the perspective of a healthcare practitioner with a professional background of delivering and facilitating continuous quality improvement in healthcare services based on patient experiences. This raises the key issue of positionality in interpretive research generally and this study in particular. Factors influencing researcher positionality in this case therefore included personal and professional experience in my life roles which were of relevance to the study i.e. healthcare professional, academic and past young hip fracture patient, as well as the knowledge and values underpinning these.

Exploring the notion of researcher identity and my 'voice' within this study represents an example of researcher reflexivity early in the research process. This is a challenge for any researcher (Gregory, 2010) but surfaced a key personal assumption, namely that for the study to be credible in professional research terms, I (the researcher), should remain objective and detached, having no voice within it. This was based on the underlying assumption that my first-hand experience of the injury and recovery experiences the study sought to explore would be judged as jeopardising the study's rigour. These initial concerns were

present in my novice researcher 'self' despite my clinical/educator 'self' highly valuing individual patient experience and the benefits of dynamic interaction and co-creation between individuals and groups, that have been a significant part of my personal and professional background. This was connected to the caring, advocacy and enabling nature of my previous clinical practice in chronic disease management and public health and personal philosophy of teaching as a participatory and enabling relationship between teacher, student and other stakeholders.

These examples represent a dynamic partnership within a unique context where the 'professional' i.e. nurse/teacher draws upon the experience and resources of the patient/student and uses this, together with their own knowledge and expertise to enable the patient/student to pursue a shared objective i.e. health and wellbeing or learning. Thus the notion of the dynamic, contextualised nature of knowledge creation and the researcher/participant partnership that characterises The Silences Framework (Serrant-Green, 2011), and the criticalist perspectives that underpin it, meant it was congruent with my personal philosophy as a researcher and the study aims. It therefore provided an appropriate conceptual framework to guide the study.

I concluded these initial assumptions regarding the issue of researcher 'voice' were borne of past experience and professional education in healthcare where traditionally positivist or post-positivist approaches dominated (Clark 1998; Polit and Beck, 2008). Seeking to completely eliminate or at least minimise researcher

impact, these approaches define the 'voice' of the researcher as that of '*disinterested scientist*' (Denzin and Lincoln, 1994, p112).

My previous research experience of using post-positivist qualitative methodologies such as early schools of phenomenology had required 'bracketing' previous knowledge and conceptions to maintain objectivity (Green and Thorogood, 2014). However, this personal experience bore out one of the criticisms of this approach which contends that 'bracketing' is difficult and can never be fully achieved (Powers and Knapp, 2010). In addition, 'bracketing' was inappropriate for this study anyway as it denies the value of the interactive, co-production of knowledge between participant and researcher that was a deliberate aim of the study. This view is shared by proponents of alternative paradigms such as Critical Theory (Kincheloe and McLaren, 2008).

Reading Eastwood (2005), a narrative study of the lived experience of endometriosis, which arose from the author's own experience of the disease and was undertaken from an 'insider' perspective, was a catalyst in my coming to terms with this personal assumption. This, together with exploring Oakley's (2007) theorisation of her own fracture experience and other relevant research philosophies, legitimised the young hip fracture study for me as a novice critical interpretivist researcher coming from a post-positivist professional background. The natural history of Eastwood's (2005) research journey mirrored the conception of this study, particularly in terms of researcher curiosity about whether or not her

own coping mechanisms and recovery experiences matched those of others and if or how these could be further enhanced for future patients.

I therefore concluded that as a researcher, my 'voice' or unique contribution to the study was as a clinician and academic with first-hand experience of the phenomena being studied i.e. isolated fracture of the proximal femur following a minor fall. Furthermore, I argue it was this specific positionality that led to the initial conception and subsequent progression of the study. During my own injury and recovery experience I used my clinical and academic experience and expertise to seek guidance from the literature, which led to the identification of a gap in the body of knowledge. This resulted in what Serrant-Green (2011) calls a 'Screaming Silence' or the 'deafening' lack of 'voice' for this client group that once 'heard' is difficult to 'unhear' and ultimately resulted in the development of this study.

My aim was therefore to maintain a reflexive stance as a researcher to manage a dynamic insider/outsider position in relation to different stakeholders in the study and points in the research process, whilst adopting a co-creation approach with participants. The aim was to ensure the findings were trustworthy and authoritative enough to add to the current body of knowledge in this area and support service change if the findings indicated this was required. A key part of enabling this reflexive, co-creative approach to the study and the research process was the involvement of a young hip fracture patient who acted as a critical friend to the study. This individual was a voluntary member of the public whom I treated as an informal partner and honorary member of the research team. She provided

feedback on the study's relevance and design, the participant materials and study findings from the perspective of an interested but independent individual with personal experience of hip fracture.

A *Collective Voices* review forms Stage 3 of The Silences Framework (Serrant-Green, 2011). This is part of the phased, cyclical data analysis process required by the framework. Membership of the *Collective Voices* groups are identified through the data gathered from the participants. In this study these were medical and nursing staff, radiographers, physiotherapists, family/carers and paramedics. The purpose of the *Collective Voices* review is to enable public and other significant perspectives to inform the study findings. The role of the *Collective Voices* volunteers was to comment on the draft study findings based on their experience of caring for people with this injury. Their feedback was used to inform my review of the data analysis and development of the final study findings.

In keeping with The Silences Framework (Serrant-Green, 2011) and in addition to the usual ethical and research governance approvals for the study which are discussed in section 3.5, formal ethical and research governance clearance was sought and granted for the *Collective Voices* review. This was undertaken as the study progressed once the *Collective Voices* groups were identified by participants. This *Collective Voices* approval was given on the basis that in commenting on the draft study findings, these individuals were part of the data analysis process and not study participants. I still had a duty of care to these volunteers and the critical friend to the study as in reviewing the findings may have

raised personal issues of concern. I ensured therefore that they had access to my contact details in order that I could provide reassurance, de-briefing and signposting to support should they need it.

2.3.2 Research Subject

The literature review in Chapter 1 established the gap in the current evidence base regarding isolated proximal fracture of the femur in young adults following minor trauma despite it being recognised as a serious injury with significant mortality and morbidity. This gap may be because the injury is less common in the young. It is not a key feature of the health or social discourses because the subject of hip fracture is commonly addressed in relation to fragility fractures in the elderly and is not an injury often associated with young adults or minor trauma by healthcare professionals or wider society. As illustrated in Chapter 1 where this subject is addressed with regard to young people, the injury tends to be associated with specific causes such as the presence of predisposing health conditions like osteoporosis or damaging lifestyle choices such as alcohol abuse. However the evidence for this is limited, specifically regarding this injury in this young group overall.

Perhaps not surprisingly, the available evidence focuses on quantitative studies and the measurement of quantifiable metrics such as length of hospital stay, infection rates, mobility levels and destination post-discharge. However, whilst these are relevant for older people they are less appropriate indicators for young individuals who are commonly without multiple pathology or increased risk (Al-Ani

et al, 2013). In addition, because of the different physical requirements that young, more physically active people have, they are also likely to have different mobility needs compared to older individuals with the same injury. These may relate to work requirements, social roles, for example as carers for children or elders and leisure interests. These issues have not been explored in the literature however, nor has there been any evaluation of the socio-economic impact of this injury in this younger patient group. As a result there is a dearth of evidence, particularly of a qualitative nature concerning patient experiences of this injury and outcomes or quality of life post operatively. In addition, the published literature predominantly addresses the early post-operative period. There is a distinct lack of research evidence focusing on longer term outcomes in this group, for example at six months or more post injury, or from an individual patient perspective. The subject of isolated fracture of the proximal femur in mid-life is therefore an underexplored topic.

2.3.3 Research Participants

Although a serious and traumatic injury, Chapter 1 identified that by comparison with high velocity trauma resulting in multiple injuries, isolated hip fracture in the under 60s is not a key feature of healthcare policy or practice. Therefore, because the study sought to include participants that were missing from standard healthcare surveillance structures and the societal discourse regarding hip fracture they were potentially difficult to access. Under-representation of this client group in the academic literature and healthcare policy meant the potential clinical and research contacts and professional or societal networks that could be drawn on to support access and recruitment were very limited as their remits did not cover the target patient population. This included national voluntary and charitable bodies

such as Age Concern and Arthritis UK as well as locality based support groups e.g. hip or knee replacement rehabilitation groups.

Neither are young people with hip fracture likely to have post-operative complications and they therefore tend not to require extended hospital care or post-operative support such as residential or community care. This prevents them becoming visible to healthcare professionals or wider society as a group with specific health needs. They are also more likely to be working or economically active in other ways, although these aspects of the injury experience have not been specifically reported in the literature. In addition, this young patient group are likely to have other social responsibilities for example as carers for children or elders, parental or other roles in society. They may therefore commonly focus on continuing to meet these responsibilities post injury and independently sourcing self-help using their own financial or social support networks to enable this. As a result they are not likely to feature in the wider social consciousness or health and social care practice. There is therefore a wider potential impact of this injury in this patient group than might be immediately apparent although the nature of this is unlikely to help precipitate recognition of this need or provide opportunities to easily identify and access individuals in this target study population.

2.4 Choice of Research Method

The choice of research method(s) should be determined by the study aim(s) (Green, 2006) and philosophical assumptions on which these are based (Mason,

1996; Carter and Little, 2007), whether these are conscious or not (Clark, 1998). However all research methods have advantages and limitations. These concern for example: the appropriateness for the research topic, participant characteristics, cost, time available, researcher skills and potential impact, as well as the types of questions posed and data required (Browne, 2006a; de Leeuw, 2008).

As established in previous chapters, the study population is a relatively small, hidden sub-set of the much larger hip fracture population because little is known of the outcomes and impact of this injury in this group. A structured survey or interview was therefore ruled out as it would require the pre-determination of topic areas or variables for study, normally from the literature, to support survey or interview schedule design (Browne, 2006b). This would be less appropriate for this study because as demonstrated in the literature review in Chapter 1, so little was known about the impact of this injury on this client group. These methods also increase researcher control and limit the scope of exploration (Edwards, 2002), which was not congruent with the aim of this study.

Interviews are a means for researchers and study participants to work in partnership (Nolan, 1995). This view is supported by Serrant-Green (2005) who proposes that interviewing facilitates participant involvement and an inclusive approach to discussing experiences. Brinkmann and Kvale (2015) go further by expressing the term interview as 'inter-view' to emphasise the personal interrelation or interaction of those involved and the 'inter-view' nature of the knowledge created as a result of this interaction. Therefore this method aligned

well with the study aim and underpinning philosophical framework. This is not surprising as interviewing is a commonly used method in sociological research which, as in this case, often concerns asking people to report their behaviour, knowledge or opinions (Alasuutari et al, 2008). Interviews are also a recognised mainstay in qualitative health research and a relatively efficient means of generating data on health topics (Green and Thorogood, 2014). In keeping with the participant led, multiple perspectives ethos of the study philosophy my approach to the interviews was one which Brinkmann and Kvale (2015) term 'traveller' or interviewer on a journey to a distant land that:

'...leads to a tale to be told upon returning home.' (p57).

This is in contrast to their 'miner' analogy where the researcher seeks to unearth valuable buried metal as a metaphor for constant, unchanging knowledge from which to extract objective facts and meanings.

Face to face rather than telephone interviews were initially the preferred method. Despite being more costly and time consuming (Browne, 2006a), they provide the interviewer with opportunities to utilise non-verbal or visual cues that are otherwise lost (de Leewu, 2008). This can be crucial for the interpretation of meaning necessary for the interpretive, emancipatory, participant led philosophy underpinning this study. However, telephone interview was also offered as an alternative. This enabled participant choice and was a pragmatic decision based on participant characteristics, plus time and geographical constraints between the research site and the researcher. Providing this option was particularly important

for the target study group who were of working age and also likely to have additional personal responsibilities. It therefore, potentially enabled participation in the study that would not otherwise have been possible or practical for some members of the target population.

Open-ended interviews were the chosen method as this approach enables oral first person accounts which Labov and Waletzsky (1967) cited in Huberman and Miles (2002) call 'natural narrative'. Although a precise definition of the term narrative interview is debated (Huberman and Miles, 2002) it can mean an unstructured interview (Green, 2006). Similarly, definitions of semi and unstructured interviews are contested. Here the focus on hip fracture recovery experiences provided some, though intentionally minimal structure as illustrated in the interview guide provided in Appendix 1. In addition, a pragmatic upper limit of two hours per interview was part of the study design. This was judged long enough to provide participants with enough time to share their experiences in detail whilst taking account of their comfort, convenience and the resources available to support the study such as access to appropriate interview accommodation.

The features of narrative or minimally structured interviews are appropriate for capturing the experiences of study participants based on their own perceptions and accounts. Green (2006) notes that narrative interviews are particularly useful for this purpose, having their roots in phenomenology and emphasis on capturing firsthand descriptions of experience (Gregory, 2010). Jones (2003) goes further, suggesting that storytelling through narrative interviewing is a democratising

experience for teller and listener, as the content is participant determined with minimal researcher influence (Robinson, 1999; Streubert and Carpenter, 1999; Edwards, 2002). Brinkmann and Kvale (2015) support this view, cautioning however that the research interview is not a conversation of equal partners because it is the researcher that introduces the topic and follows up the interviewees' responses. This is the case even when interviews are minimally structured. Working collaboratively on patients' stories however, supports current healthcare policy regarding patient and public involvement in research, as it recognises the contribution of experiential knowledge to improving healthcare (Gregory, 2010; Haigh and Hardy, 2010; Lees, 2011). Furthermore, narrative interviewing fits this study topic as Archibald (2003) notes that hip fracture recovery is a complex and subjective experience.

Telling stories of past events is universal in people from all social backgrounds. A minimally structured, narrative interview is a social, relational situation involving researcher and participant (Huberman and Miles, 2002). However, listening to patient stories raises issues of power differentials and varied perceptions of the value of lay knowledge and the potential for patient experience to improve healthcare (Gregory 2010). Nevertheless, Doucet and Mauthner (2008) and Aull-Davies (2008) argue that meaning making begins through the dialogic process of storytelling and co-construction. This is particularly so for making sense of difficult life transitions, traumatic experiences and health journeys (Huberman and Miles, 2002; Miller, 2000; Colbourne and Sque, 2005; Haigh and Hardy, 2010).

Storytelling therefore, is a relevant method for rehabilitation studies about how individuals create meaning and a positive future by making sense of what happened to them (Gregory, 2010).

Frank (2002) argues it is the dialogic nature of the storytelling process that creates the narrative's authenticity. However, the researcher is the key instrument in knowledge construction using this approach (Kvale and Brinkmann, 2009; Pezalla et al, 2012) and a high level of skill is required. In particular, narrative interviewers must be adept listeners and able to deal with issues as they emerge, which requires a constantly reflexive approach (Aull-Davies, 2008). Researcher reflexivity and the taking of a postmodern stance, is one of six key strategies researchers use to enhance the credibility of the research (Cousin, 2005). In particular, issues of power and actual or potential researcher influence on: the participant; the interview process; the information disclosed or left unsaid; and the ownership of knowledge, require greater transparency from narrative methods researchers (Gregory, 2010).

Researcher 'positionality' as previously discussed is important when using narrative methods as well as The Silences Framework (Serrant-Green, 2011). Debate continues regarding the complex issue of 'otherness', or our ability to know those who are different from us. The shifting, interactive complexity of multiple identities and experiences that may differ or be shared by researcher and participants, and how these are managed in practice, is recognised as another key area for researcher reflexivity (Ballinger and Payne, 2000). In addition, reciprocity, where researchers decide upon the appropriateness and degree of self-disclosure during the research process is a further challenge when using this type of method (Doucet and Mauthner, 2008; Pezalla et al, 2012).

Storytelling however has an appeal for health professionals because of its potential to enable people to make sense of disruptive life events brought about by illness, which healthcare staff witness (Reissman, 1990). In addition, the therapeutic potential of storytelling for the storyteller has been identified (Morse and O'Brien, 1995; Colbourne and Sque, 2005; Haigh and Hardy, 2010). Healthcare researchers need to be cognisant of this issue as Gregory (2010) and Sparkes (2005) argue this is a hidden but caring aspect of the researcher's role when using narrative methods. Thus the complex interplay between therapeutic and research roles for healthcare professionals using narrative methods needs to be recognised and managed. Part of this process is the recognition of the differences between a research interview and one undertaken in clinical practice as explored by Kvale and Brinkmann (2009).

2.5 Research Design

In keeping with the aims of the study, an experience based design was used to enable exploration of and learning from the experiences of study participants, using qualitative, minimally structured interviews to elicit 'thick' (Geertz, 1973 cited in Huberman and Miles, 2002) or 'rich' descriptions of participants' experiences. This approach fits the study topic as hip fracture recovery is a complex, subjective experience (Archibald, 2003). One pilot plus 30 main study interviews were completed. These were one to one interviews of up to two hours with individuals who had sustained an isolated fracture of the proximal femur following a minor fall and were aged 18-60years at the time of injury. Data was collected July to

November 2014 and analysed using an inductive, data-driven thematic analysis based on the six step process described by Braun and Clarke (2006) within the four phase cyclical data analysis process required by The Silences Framework (Serrant-Green, 2011).

The centrality of the individual's lived experience in the study represents a participatory, inclusive approach. Denscombe (2003) argues there is inherent respect for participants in this approach which was congruent with my personal and professional philosophy as a researcher and the criticalist philosophy underpinning the study. The aim therefore was to facilitate a participant/interviewer conversation through which the participant told their story of injury-recovery, ensuring the process was guided by participant priorities (Green, 2006).

2.5.1 Access and feasibility

The feasibility of any research is a key practical consideration (Gray, 2014) and ultimately potentially impacts on the study design. This is particularly so when researching under represented or marginalised groups who may be relatively small in number and/or difficult to access for other reasons.

Due to the nature of the injury everyone with a hip fracture requires hospital treatment (NICE, 2011). NHS records therefore offered the most comprehensive and robust means of accessing the target group. NHS Trusts do not generally keep the detailed records required to enable the identification and recruitment of

individuals who sustain a hip fracture before 60 years of age however as there is no formal or statutory requirement to do so. Fortunately, email contact with a clinician who had published a rare paper at the time, addressing hip fracture in the under 65s (Karantana et al, 2011), uncovered a large clinical database developed and maintained by the Department of Trauma and Orthopaedic Surgery in a large acute NHS Trust in England. Unusually, this database did include people under 60 years of age at injury.

Established in 1999 and described elsewhere (Maxwell et al, 2008) this database was the basis for the development and subsequent revision and revalidation of a Hip Fracture Score (HFS) for reliably predicting 30 day mortality, one year mortality and functional outcome post hip fracture (Moppett et al, 2012b). It contained a prospectively collected, quality controlled dataset based on the European Standardised Audit of Hip Fractures in Europe (SAHFE) process (Parker et al, 1998) and its high levels of data accuracy had been demonstrated (Moppett et al, 2012b). As a result, this database provided a robust tool to support access to and recruitment of study participants.

2.5.2 Study site characteristics

The study site was an NHS regional trauma centre in England, originally established in 2012 and further expanded in 2014. It is one of a national network of specialist centres catering for patients with multiple serious injuries and is rated one of the best in the country (National Peer Review Programme, 2015).

Comprehensive auditing of hip fracture care has been undertaken there since 1999

and Moppett et al (2012b) emphasise the usefulness of the associated database for informing practice. In addition it was from this data that:

‘...the most widely used model in the literature...’ (RCP, 2015, p 21)

for predicting hip fracture outcomes was developed (Gunasekera et al, 2010). This preceded the establishment of the National Hip Fracture Audit /National Hip Fracture Database which subsequently grew from collaboration between the British Orthopaedic Association and the British Geriatrics Society in 2007 to become the largest hip fracture audit in the world (RCP, 2015).

The centre serves a regional population of approximately 4.6 million (7.2% of the UK population). This includes over 880,000 people living in its three largest cities, 63.4% of which are aged 16-64 years (0.4% lower than the UK as a whole). Life expectancy is fourth highest of the nine English regions and 78.6% of the population are economically active, 0.9% higher than the UK as a whole (East Midlands Councils, 2015). Gunasekera et al (2010) report that based on the hip fracture register data, the incidence of hip fracture in the local population has steadily increased over the past decade.

2.5.3 Study population

The target study population, identified from the database, was adults who had undergone surgical repair of an isolated proximal fracture of the femur following a minor fall more than nine months previously and were between 18-60 years of age at the time of injury. This population was chosen to address the gap in the current

body of knowledge concerning the longer term recovery experiences of younger people with a hip fracture following a minor fall. Although as shown in section 1.3.1 the term fragility fracture is clearly defined, determining what constitutes an 'early' fragility, or low energy fracture in terms of age was not straightforward. The literature review identified little consensus on this issue with previous studies including participants from 20 through to 60 or 65 years of age. The National Hip Fracture Database (NHFD) (for England, Wales, NI and the Channel Islands) only registers individuals aged 60 and over. A pragmatic decision was therefore made to include people aged 18-60 years at the time of injury in this study. Setting the upper limit for inclusion at 60 years of age aimed to minimise the potential for further silencing younger individuals not currently recorded on the NHFD.

Purposive sampling was used to select members of this population to address the study aim. Connelly and Yoder (2000) encourage the use of the term purposive rather than convenience sampling for qualitative studies to describe the selection of participants who are not only accessible but more importantly, relevant to the phenomenon being examined. The full inclusion/exclusion criteria are provided in Table 1.

Interrogation of the hip fracture database in May 2014 identified 824 people aged between 18-60 years with a proximal fracture of the femur since 1999 when the records began. Of these, 88 people were excluded as the mode of injury was high velocity trauma i.e. Road Traffic Accident. Hip fracture following high velocity

TABLE 1: Selection criteria

Inclusion criteria	Exclusion criteria
Age 18 - 60 years at time of fall	Age under 18 years or over 60 years at time of injury
Between 9 months and 10 years since fall	<9 months or >10 years since fall
Surgical repair of isolated fracture of the proximal femur (hip)	Planned hip arthroplasty (hip replacement) for chronic conditions e.g. osteoarthritis
Isolated hip fracture following low velocity fall	No fall e.g. stress fracture, pathological (malignancy) fracture
	High velocity trauma or multiple injuries
	Taking Bisphosphonate medication indicating previously diagnosed osteoporosis
	No contact address on record

trauma is commonly associated with multiple injuries and already features in the literature therefore was not the focus of this study. A further 84 people were excluded as they were recorded as 'no fall'. These included stress or pathological fractures resulting from underlying conditions which were not the focus of the study.

Two individuals taking Bisphosphonate medication were also excluded as this indicated a previous diagnosis of osteoporosis and associated predisposition for sustaining a major fracture following a minor fall. The incidence, implications and impact of osteoporotic fractures is well documented in the literature therefore this group were not the focus of this study. In addition, 96 and 42 people were

excluded as their injury occurred more than 10 years ago or within the previous nine months respectively. This enabled the study to address the gap that had been identified in the literature by focusing on individuals' experiences after the initial injury and recovery phase.

A maximum of 10 years post injury was used as a pragmatic time period on the advice of the supporting NHS Trust trauma and orthopaedic research co-ordinator. This is common practice in the discipline due to known difficulty contacting people more than 10 years post admission due to changes of address for example. However, these parameters still enabled a viable sample to address the current lack of evidence regarding recovery experiences of individuals more than six months post injury. A further 18 people were excluded as they would experience a different recovery pathway, having been treated non-surgically and another two as there was no address on record. Finally, 149 individuals were excluded as they were deceased at the point of sampling. This exclusion process is summarised in Table 2 and resulted in an eligible and accessible study population of 343 potential participants.

Whilst the final sample was determined as the study progressed and data collection continued in response to the needs of the study (Huberman and Miles, 2002), 343 people were invited to participate in mid July 2014 with a two week deadline for response. This study population was judged appropriate to effectively meet the aims of the study (Green and Thorogood, 2014) and be manageable within the resources available but also sufficient to render the study viable. This

TABLE 2: Summary of initial exclusions

Exclusion criteria	No. Excluded	Total remaining
Hip fracture patients admitted between 5.5.99 & 27.5.14	n/a	824
High velocity injury e.g. RTA	88	736
No fall	84	652
Admitted >10 years ago	96	556
Admitted <9 months ago	42	514
Treated non-surgically	18	496
No address	2	494
Bisphosphonate medication	2	492
Deceased	149	343
Total invited to participate in the study		343

was based on an anticipated response rate of 5-10% in view of the extended time since injury for some of the individuals who may therefore prove lost to contact. As suggested by Mauthner et al (2002) and in accordance with the Research Governance Framework (DH, 2005b), strategies were used to ensure an inclusive approach for all eligible individuals. These included cohort sampling, clear written communication i.e. invitation letter / participant information sheet (Appendices 2 and 3) and convenient, participant-friendly interview arrangements concerning timing, location and the availability of a telephone interview.

2.5.4 Recruitment

This comprised two stages:

Stage 1

The research co-ordinator in the supporting NHS Trust invited eligible individuals to participate in the study on my behalf using a postal recruitment pack. This pack included the invitation letter (Appendix 2), Participant Information Sheet (Appendix 3) and reply slip (Appendix 4). These documents had been previously reviewed by the patient critical friend to the study and approved by the relevant Ethics (Appendices 5 and 6) and Research and Innovation Committee (Appendix 7). They were designed to give enough information to enable potential participants to make an informed choice about whether or not to participate in the study, without being too long and cumbersome. The use of jargon was avoided to facilitate understanding and details of who to contact for further information or with queries was included. Each pack included a copy of the consent form (Appendix 8) to facilitate the consenting process at a distance for participants who might opt for telephone interview. This also gave individuals the opportunity to consider participation in the study at their convenience, in their own environment and to discuss the matter with friends or loved ones should they wish.

Reply slips were returned to the NHS Trust staff member supporting the study. A total of 71 people responded representing a 21% response rate. Reply slips were then forwarded to me by post in an initial batch of 50 followed by a further 21 a week later. This was purely pragmatic and dependent on the Trust contact's

workload and availability. Seventy of the responses indicated a willingness to participate in the study.

Stage 2

I contacted each individual by either telephone or email, according to their preference, as soon as possible after receipt of the reply slips. This initial contact served three main purposes. These were to:

1. Confirm eligibility

Eight people were excluded at this stage as they did not fit the study inclusion criteria. Specific reasons for these exclusions are detailed in Table 3. All these individuals gave verbal permission to be contacted again should the inclusion criteria need to be widened later if the target number of participants was not achieved. Although reliant upon self-reporting, these exclusions reflect potential anomalies in the hip fracture database coding/retrieval process. Despite having a high level of data integrity with an error rate of < 0.3% (Maxwell et al, 2008) some anomalies are to be expected given the complexity of managing and quality assuring such an extensive and longstanding database.

This stage of the recruitment process also resulted in revisiting the original operational definition of a 'low velocity fall'. This was triggered by a number of individuals who had had relatively low speed cycling accidents that did not involve other road users. They fitted the original operational definition in terms of height of fall i.e. 'from standing height/ less than 10 feet but were travelling faster than the original definition of low velocity which was 'brisk walking pace' or 4-5 mph (BHF,

2014). One cyclist was virtually stationary at the time of the fall with others travelling at relatively low speed. Therefore, to avoid inadvertently silencing and therefore further marginalising these respondents I reviewed the cycling accident literature before revising the original operational definition of speed to a maximum of 15 mph to determine inclusion/exclusion for this study.

Of the original 71 responses, 31 were not contactable using the details they provided on the reply slip. In some cases, my difficulty deciphering their handwriting may have contributed to this although attempts were made to try different options or interpretations of handwritten email addresses and telephone numbers to minimise the impact of this. This was not an issue for those who chose to reply to the original invitation via email. Whilst only offering the option of email response could have reduced practical problems with the legibility of the reply slips, it could also have reduced the response rate and ultimately limited recruitment as 29 respondents (41%) preferred telephone contact at this initial stage. A telephone or email message was left for each individual where necessary plus a follow up reminder after a few days before they were assumed uncontactable. As a result the study recruited to target at the first attempt with a total of 32 participants. Of these, one individual subsequently did not attend for the scheduled interview and another was used as a pilot interview resulting in a final study group of 30 participants.

TABLE 3: Summary of exclusions at secondary screening

Reason for exclusion at screening	No excluded	Total remaining
No. reply slips returned	n/a	71
No fall/stress fracture	1	70
High velocity trauma		
RTA	1	69
Fall from >4 feet	3	66
Ski accident/high velocity fall (>15mph)	1	65
Shaft of femur fracture	1	64
Planned hip replacement (e.g. THR for arthritis)	1	63
Non-contactable	31	32
Total recruited to study	n/a	32
Pilot interview	1	31
Did not attend for interview	1	30
Total study group		30

2. Arrange interview

During this initial telephone or email contact respondents' preferences regarding telephone or face-to-face interview were confirmed and a mutually convenient date and time were agreed. Participants selected an interview appointment from a range of options for which appropriate accommodation had previously been agreed in the supporting NHS Trust. This worked very well and interviews were arranged by telephone or email for all participants seeking face-to-face interview. A follow up letter or email was sent confirming the interview details, including

directions to the interview location for face-to-face interviewees. A number of participants opted for telephone interview as these could be conducted in the evenings. This was more convenient for them, but also lessened practical issues such as the availability of suitable interview accommodation and maintaining safety as no face to face interviews were required outside normal office hours. It also meant I could offer maximum flexibility for appointments to suit the participants. Not surprisingly, telephone interview was particularly popular with participants who were in full-time work or had other personal responsibilities.

3. Begin building rapport

A brief conversation which included questions regarding age at injury, circumstances of the fall and time since injury was used to build rapport. This provided some background information regarding each participant and gave me an overall 'feel' for the study group, but also provided individuals with an opportunity to ask questions regarding the study and their participation.

2.6 Chapter summary

This section has justified the methodology and theoretical framework underpinning the study. In particular the chapter has identified the 'silences' that are inherent in my undertaking this study at this particular time. These have been discussed in terms of researcher identity, the subject of hip fracture and the characteristics of the young hip fracture population. Appropriate detail regarding how the study group was determined, accessed and recruited has been provided to allow the reader to determine the suitability of the approach taken and how this aspect of

the study was developed and implemented. The use of minimally structured, narrative interviews as the data collection method has also been explored. The following chapter therefore addresses the data collection and analysis processes that were undertaken to arrive at the findings and final study outputs.

Chapter 3

Stage 3: Voicing Silences (Data collection and analysis)

3.1 Introduction to the chapter

Having established the philosophical and theoretical approach underpinning the study in the previous chapter, this section will focus on Stage 3 or the 'Voicing Silences' stage of The Silences Framework (Serrant-Green, 2011). The aim of this stage was to:

'...explore silences in context....to expose the situated views and experiences of those involved.' (Serrant-Green 2011, p355)

A pilot interview was undertaken as a developmental process. Therefore, whilst the learning from this, which is detailed in the following section, was used to inform subsequent interviews, this data was not included in the main study. The study data set therefore comprised 30 minimally structured narrative interviews which were each transcribed verbatim and analysed using an inductive, data driven thematic analysis as outlined by Braun and Clarke (2006) within the cyclical, four stage data analysis process required by The Silences Framework (Serrant-Green, 2011). The data collection and analysis processes are described in detail in the following sections along with the strategies taken to ensure the trustworthiness of the study.

3.2 Data collection process

3.2.1 Pilot study

A telephone interview with a patient from the study population who was not included in the main study served as a pilot interview and was undertaken in late July 2014. This approach was adopted for pragmatic reasons, particularly given the difficulty identifying and accessing members of this client group.

In line with the ethical approvals granted for the study, informed consent was obtained and a minimally structured interview based on the interview guide in Appendix 1 was undertaken to enable the participant to give a full account of her experience. This was a deliberate attempt to democratise the interview situation and re-balance power between researcher and participant (Gregory, 2010). It also reflects the flexibility that Green and Thorogood (2014) note is a feature of qualitative, participant-led research in which the researcher acts as bricoleur.

This pilot interview experience was used, together with the literature, to develop my interviewing approach for the main study (Sque and Payne, 1996). Whilst the interview guide remained the same, I did further develop the secondary screening proforma as a result of learning from the pilot study to arrive at the version used for the main study (Appendix 9). Prompts regarding practical matters such as seeking contact details for their General Practitioner (GP) where relevant and whether or not the participant wanted to comment on the initial study themes were

added to the proforma following the pilot interview and this was used as an aide memoire alongside the interview schedule for all interviews in the main study.

The pilot interview enabled me to refresh my qualitative interviewing skills and specifically to develop telephone interviewing skills as I had not previously undertaken in-depth telephone interviews. This first interview also enabled me to test and become more familiar with operating the digital recorder and telephone recording equipment in practice and safely manage the MP3 data files afterwards. The pilot interview confirmed the quality of the audio recording and suitability of the planned interview accommodation.

This process also verified my ability to build rapport with the participant by putting her at ease (Dainty et al, 2014) without the benefit of visual cues as in a face to face interview. However, it quickly became clear that she was expecting a more traditional, structured interview in which I asked specific questions. I therefore had to work harder than expected to encourage her to speak about her injury and recovery experience. This was key learning and informed my approach to main study interviews. The pilot interview also provided valuable experience of giving periodic verbal summaries during interview as a means of in-interview member checking and writing brief anonymised notes to support this process whilst maintaining my active listening. These summaries appeared to enable the participant to have a rest and gather her thoughts before continuing to speak. This often meant that after a summary she began sharing additional information or went on to a new topic. At times she interrupted me to provide additional information,

clarify or verify my summaries, thus confirming my initial assumptions about the potential benefits of this strategy.

The pilot interview was also used to develop a format for field notes and a research summary made directly after the interview to capture my initial impressions and reflection on the process whilst these were fresh (Huberman and Miles, 2002; Gray, 2014). I subsequently used this strategy for the main study interviews. These are practical examples of the issues Brinkmann and Kvale (2015) recognise as the '*...messy practice of conducting an interview study.*' (p126) that belies the formal presentation of a clearly structured interview study protocol that is required for funding or other processes such as ethical approval.

Transcribing the pilot interview was relatively unproblematic. It did however confirm the time-consuming nature of this process which informed planning for the main study. It also provided practice with the transcribing equipment and setting up a process and structure for secure storage and easy retrieval of the resulting transcripts. The pilot interview data was used to practice importing and coding using NVIVO 10 which was then used to support data analysis in the main study.

3.2.2 Main Study

One participant was lost to the study during this stage as he did not attend the arranged interview or respond to a follow up telephone message. Therefore 15 telephone and 15 face to face, minimally structured, narrative interviews were

undertaken in the main study resulting in a final study group of 30 participants. Three interviews were of 50-60 minutes duration with the remaining 28 lasting between 90 and 155 minutes. Twenty-seven interviews were completed in August and early September 2014 and the other three between the end of October and early November 2014. I undertook all the face-to-face interviews on NHS Trust premises in private but accessible and appropriately comfortable interview accommodation that was regularly used for research interviews by the local clinical department. The Trust trauma research co-ordinator facilitated all practical arrangements and there were no interruptions affecting the interview process or quality of the recordings.

To minimise potential power influences I adopted a friendly and welcoming approach, paying even more attention to this whilst conducting the telephone interviews where non-verbal cues were absent. I reiterated to participants their right to stop the interview at any time should they wish. I dressed smartly but causally and avoided the use of jargon or acronyms. I also emphasised at the start of each interview that my aim was to enable the participant to determine the content and flow of the interview as much as possible therefore I would mostly listen to what they had to say, speaking mainly to clarify or summarise what they had said. I informed each participant that the very brief notes I would be making during the interview were to support the brief summaries I would provide for them at various points as the interview progressed and that these would also be treated as confidential.

The secondary screening proforma was very effective in supporting my summaries of the brief information they had initially shared with me regarding the circumstances of their fall back to each participant. Providing this verbal summary at the start seemed to make it easier for main study participants to begin recounting their story than had been the case for the pilot interview participant. As the interviews progressed and themes began to emerge, I offered each participant the opportunity to talk about topics that had been raised in earlier interviews if they had not been discussed up to that point before ending each interview. This seemed to act either as a welcome prompt for participants who then went on to share additional information that might not otherwise have emerged or indicate that these particular issues were not a feature of their experience.

The potential for participant distress when recounting a traumatic injury experience was recognised although none of the participants took the opportunity offered to have a friend or relative attend the interview with them. The exception to this was a wheelchair user whose Personal Assistant (PA) attended the interview to assist with her physical needs. This interview became a three-way conversation at times, when the participant sought the PA's assent or clarification on the experiences she was describing.

A number of participants recounted traumatic life experiences they considered relevant to their hip fracture recovery. On two occasions during face-to-face interviews I identified non-verbally that participants appeared to be becoming upset. In the first of these, I interpreted the split second eye contact I received as

saying to me *'it's ok'* and she continued speaking so I refrained from verbally asking if she wanted to stop the interview and allowed her to continue, which she did. On the second occasion the participant was visibly becoming upset. I did offer to stop the interview as indicated in the Patient Information Sheet however she wanted to continue and immediately went on to complete the interview. This individual subsequently contacted me to offer additional information regarding the situation she had recounted. None of the participants accepted the information on local follow up support that was offered during debriefing immediately post interview or contacted me afterwards to request this. Eighteen of the participants requested their GP be informed of their participation in the study therefore the study information letter (Appendix 10) was sent as soon after the interview as possible on either the same or the next day.

3.3 Data Analysis

3.3.1 Preparation of the data for analysis

In preparation for data analysis, and to ensure the most accurate recollection and recording of participant experiences as possible, the audio recorded interviews were transcribed verbatim as soon after they occurred as possible (Brinkmann and Kvale, 2015). Based on a review of the literature on transcription between 1979 and 2009, Davidson (2009) noted that traditionally transcription has been a neglected issue especially in the reporting of research. However, there is a need for researchers to think about the style of transcription to be used before starting, to prevent a resulting transcript style that is incongruent with the study methodology and underpinning philosophy (Oliver et al, 2005). I therefore took a

naturalised approach to transcription, making transcripts as detailed as possible by including pauses and stutters etc. This was congruent with an interpretivist methodology and The Silences Framework (Serrant-Green, 2011) Stage 3 which aims to focus on the participant 'voice' rather than the researcher's representation. However, Kvale and Brinkmann (2009) state that transcription is more than mechanical selection and application of notations. Rather it is the result of choices researchers make, which can be influenced by their theoretical positions and how they locate themselves and others in the research process (Jaffe, 2007). Duranti (2006) claims that Ochs (1979) original assertion that:

'...transcription is a selective process reflecting theoretical goals and definitions' (p 44)

still stands. This reiterates the importance that The Silences Framework (Serrant-Green, 2011) places on the issues of researcher identity, positionality and the need for reflexivity.

Davidson (2009) identifies a range of potential transcribing errors. These include: mishearing, misinterpreting and misspelling words and phrases that could completely change the meaning of what participants said. Strategies adopted to minimise these were listening to the audio recordings whilst simultaneously reviewing the completed transcripts to ensure the meaning and accuracy of what had been transcribed within the context of the recording. In addition, I transcribed as many of the interviews as possible myself (n= 18) partly as a means of immersing myself in the data and partly to minimise error as I had undertaken the

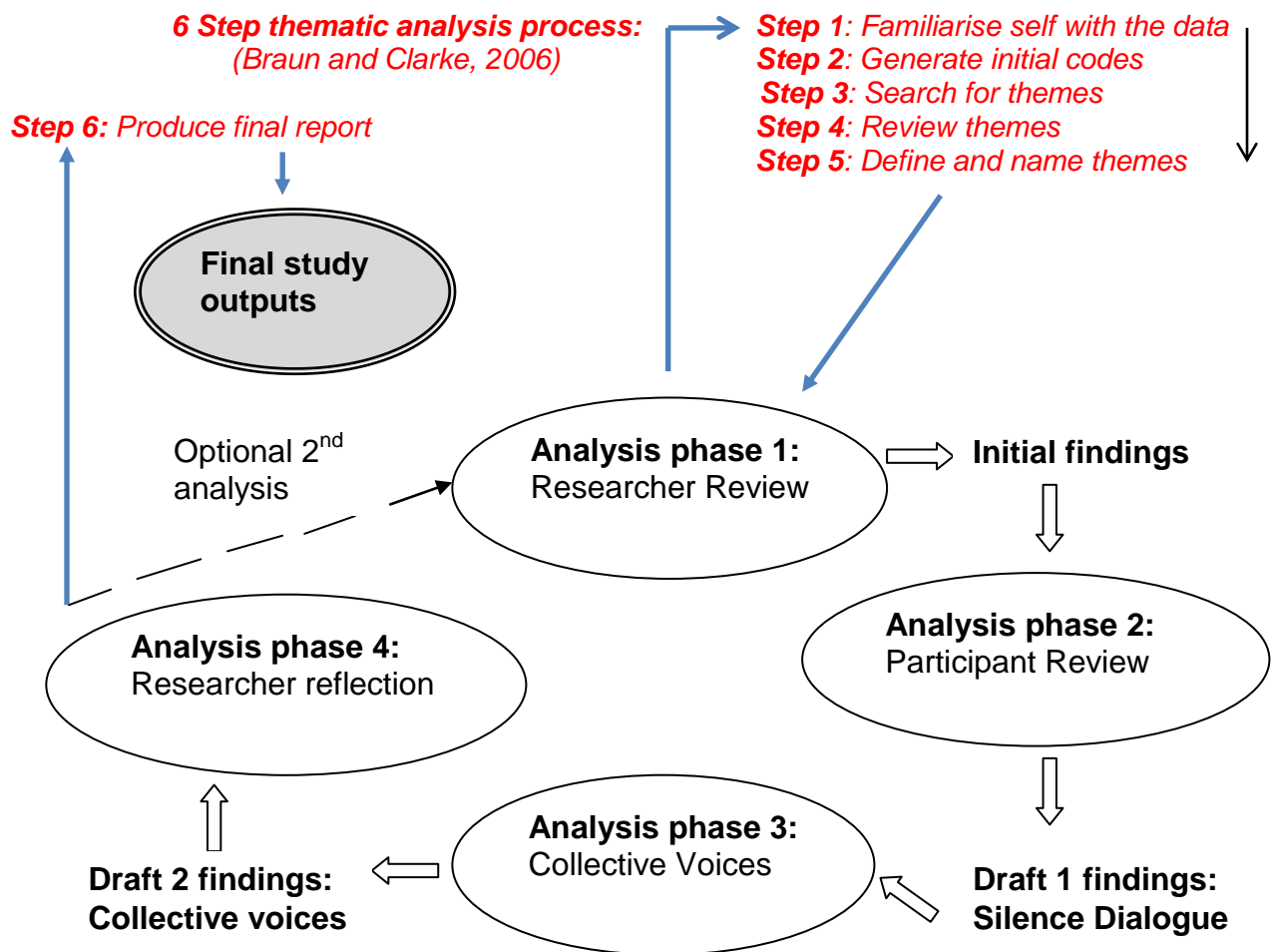
interviews and had therefore 'tuned in' to the participants' local dialect. The remainder (n=13) were transcribed by contracted transcribers who I had briefed on the style of transcribing required, to enhance consistency (Brinkmann and Kvale, 2015). I subsequently checked all these transcripts against the original audio recordings to ensure accuracy and to help immerse myself in the data I had not personally transcribed. During this process, based on my research notes and vivid memory of the interviews, I was able to complete some sections noted as inaudible by contract transcribers and corrected a small number of errors.

3.3.2 Data analysis processes

Guided by Stage 3 of The Silences Framework which comprised a four phase cyclical analysis process (Serrant-Green, 2011), an inductive, data driven thematic analysis was undertaken based on Braun and Clarke (2006). Figure1 illustrates how these two frameworks were integrated during the data analysis process.

In keeping with the philosophy of The Silences Framework (Serrant-Green, 2011) the data analysis was undertaken with a specific emphasis on identifying the gaps or silences in the data and what was not said. This supports Cousin's (2005) assertion that thematic analysis may also include themes about what is absent in the data. The concept of 'Screaming Silences' from which The Silences Framework was derived (Serrant-Green, 2011) was developed by a researcher to reflect what was left unsaid by study participants i.e. a missing theme during a study exploring ethnicity and sexual health decision-making (Serrant-Green, 2004).

FIGURE 1: The data analysis process integrating The Silences Framework four phase data analysis cycle (Serrant-Green, 2011) and the thematic analysis process (Braun and Clarke, 2006)



The Silences Framework four phase data analysis cycle (Serrant-Green, 2011)

Although meaning and language are inevitably intertwined, data analysis for the study focused on the meaning ascribed by participants and was data rather than concept driven (Kvale and Brinkmann, 2009). However, as researchers:

‘...reconstruct data into a theory that they themselves must own...’ (Mills et al, 2007, p 74) this was another key area where researcher reflexivity during the data analysis process was crucial, acknowledging the co-creation philosophy of the study in terms of participant – researcher collaboration with each bringing their

experience and expertise to the shared venture of research. NVIVO 10, a commonly used software package for qualitative research, was used to securely manage the data and support the analysis process. Although absolutely every minute step of the analysis process cannot be presented (Flick, 2015), this systematic analysis process is described in detail in the following sections.

An inductive, data driven thematic analysis of the data was undertaken guided by Braun and Clarke (2006). This process consists of 6 phases or steps:

Step 1: Familiarising yourself with the data

Step 2: Generating initial codes

Step 3: Searching for themes

Step 4: Reviewing themes

Step 5: Defining and naming themes

Step 6: Producing the report

3.3.2.1 Phase 1 analysis: Researcher review and initial findings

This phase comprised my initial analysis of the data with reference to the research question and the constraints previously acknowledged above.

Step 1, familiarising myself with the data began whilst preparing the data for analysis as described in section 3.3.1. Undertaking all the interviews personally and transcribing and/or checking transcripts for accuracy against the interview recordings helped me become familiar with the data initially (Gray, 2014). In

addition, reviewing the in-interview summaries made to support the in-interview member checking process, as well as the post interview reflections and initial perceptions regarding key issues identified by each participant, further enhanced my familiarity with the data at an early stage. This was supplemented by a quick but purposeful first read of the transcripts (Bazeley and Jackson, 2013) during which I noted down initial ideas and possible themes or groups of similar ideas and patterns in the data (Braun and Clarke, 2006).

The interview recordings and transcripts were imported and securely stored in NVIVO 10. The initial analysis then entered what Braun and Clarke (2006) call Step 2, namely the generation of initial codes or labels reflecting segments of text from the transcripts (Gray, 2014). A data driven approach to this process was used in which I did not set out with pre-defined codes, but developed these as the analysis progressed, through reading the transcripts and listening to the recordings (Brinkmann and Kvale, 2015). I systematically open coded (Flick, 2015) each transcript line by line, sentence by sentence, to determine the meaning of each segment. Labels or codes, based on this reading and understanding of the text, were then attached (Brinkmann and Kvale, 2015). The aim was to use words and phrases which the participants used for these labels – also known as ‘in vivo coding’ - to keep these as close as possible to the original text (Flick, 2015). Where appropriate, data segments were coded to multiple codes (Braun and Clarke, 2006) to enhance the quality and depth of the coding but cognisant of the risk of focusing too heavily on over coding at the expense of interpretation (Gray, 2014). Appendix 11 provides a transcript excerpt with initial coding by way of example.

With reference to triangulation during data analysis as a means of enhancing the credibility of the study, some qualitative researchers (e.g. Rubin and Rubin, 1995) dismiss the relevance of using a second data analyst for the purposes of increasing inter-rater reliability. They argue this is a quantitative approach which is far more difficult to achieve but also not appropriate for a qualitative study anyway as no view of a social phenomenon can be exactly the same as another (Kincheloe and McLaren, 2008). Therefore, a second data analyst in this traditional sense was not employed although the research supervisor did review and compare her headline analysis/emerging themes from one transcript with mine. Pope and Mays (2000) concur with Holloway and Wheeler (2002) that a second data analyst can be useful where perceived researcher bias is a risk. Although the theoretical approach underpinning this study recognises the contribution and potential influences of the researcher, this sample checking process enabled an experienced peer who was not directly involved in the data collection to verify the quality of the interview data and compare her analysis with mine. In fact the key points and themes she identified in the interview mirrored my own initial analysis.

This checking process not only helped to enhance the credibility of the study but also gave me confidence in my data collection and analysis skills. This process was undertaken early in the research so I could use the experience to inform the ongoing data collection and analysis. In addition, what Lincoln and Guba (1985) term debriefing took the form of critical questioning and discussion during supervision sessions to enable me to become aware of my approach to the data

and its analysis, test emergent themes and identify assumptions I might be making during this process.

This initial coding process resulted in 35 codes which included a 'to sort' code. Column 1 in Table 4 provides a list of these initial codes. As new codes were introduced they were given a brief description which could be accessed as a reminder when needed to help support consistent coding (Green and Thorogood, 2014). This proved invaluable particularly early on in the coding process as I increased familiarity with this aspect of research practice and the code list as I developed it from the data. Whilst this is a crucial stage of any qualitative research project, Silverman (2013) argues that we all 'code' information and other experiences as we go about our everyday lives. He labels this as '*interpretive practice*' (p51). I was aware of bringing these generic human skills to this task as well as my familiarity with the data, having undertaken all the interviews and either fully transcribed or checked all the associated transcripts. However I was also very conscious to avoid relying on memory or this prior knowledge but rather to undertake a systematic and comprehensive coding process.

Notes were made reflecting some of the issues/themes I became aware of during the coding process for comparison with my research diary either after specific interviews or over the period in which I was conducting the interviews. For example, one participant used the phrase '*car to bar*' to describe her approach to post injury footwear. This had required clarification during the interview to ensure I fully understood what she meant to convey. It also however, mirrored what other

participants had said on this topic. The *'to sort'* code was used throughout for participant comments that did not fit within the current code structure or which might require a new code. These were therefore 'parked' in this code for further consideration later as recommended by Beekhuyzen (2007). Coding to this code however naturally decreased as coding progressed and the code list developed. This approach was taken to ensure that a thorough method of coding was used that stayed true to the text but prevented developing potentially hundreds of codes that could have been impractical to manage effectively.

Having completed this process I returned to check the coding of early interviews based on my notes of when each new code was introduced. This strategy was adapted from the constant comparison method used in Grounded Theory (Green and Thorogood, 2014). Although this study did not use a Grounded Theory methodology, the principle of a data driven approach to analysis which is a key feature of Grounded Theory approaches, is consistent with its philosophy and this strategy was used as a means of increasing the completeness of this initial stage of analysis. I re-checked the coding of nine transcripts but then abandoned this process because I was finding the data was appropriately coded and additional coding was not required. My initial impression that this step had been a waste of valuable time was unfounded as it did provide evidence or reassurance that appropriately detailed, full coding and data saturation had been achieved. It was possible that the strategy of coding to a *'to sort'* code any segment of text I sensed was important to the participant that did not fit a current code, was why this re-checking of early coding revealed very few additional segments of text requiring further coding or text that was inappropriately coded.

After initial coding of all transcripts, each of the *'to sort'* code data segments were reviewed against the current code list and then re-coded accordingly. This indicated that the code list had developed to include new codes with which these early data segments were compatible. Data from smaller codes were then reviewed and recoded into other relevant codes. Changes made at each stage of the theme development are indicated in italics in columns 2-4 of Table 4. For example, references in the *'care overall'* code were re-coded to the *'A&E'*, *'ward'* or *'post-discharge'* codes. This reflects the emergent nature of the code structure and content as the initial coding progressed. I kept revising codes to ensure the content reflected the label and description or to enhance clarity.

This was part of an iterative process in step 2 of the thematic analysis that moved between the coded data, the source transcripts, interview recordings and field notes. It was a further opportunity to check the quality of the coding and code structure, illustrating the non-linear nature of the analysis process (Braun and Clarke, 2006). NVIVO 10 was very helpful in this endeavour as it enabled easy switching between the coding, transcripts and interview recordings. Using NVIVO also meant the data extracts were automatically collated to the relevant code, which comprised the final part of the Step 2 analysis (Braun and Clark, 2006).

Step 3: Searching for themes (Braun and Clarke, 2006) was achieved by collating the codes into themes. Here the analysis focused on sorting the initial codes to identify broader potential themes and related sub-themes. Columns 1-4 in Table 4 illustrate the detail of how initial codes were combined to reduce repetition and

produce broad themes. For example, changes included combining codes titled '*Fear*' '*Confidence*', '*Control*', '*Resignation*', '*Perception of severity*', '*Shock*' and '*Sense making*' to form the new '*Emotional impact*' code. This process of 'collapsing' (Burnard, 1991) resulted in the emergence of one cross cutting theme *Communication* and a further four main themes of *Care experience*, *Impact on self*, *Impact on others* and *Moving forward* with associated sub-themes as outlined in Column 5 of Table 4.

Step 4: Reviewing themes was undertaken on two levels (Braun and Clarke, 2006). First all collated data extracts for each theme were reviewed and checked for coherency. This was unproblematic, possibly because of the extra steps taken earlier to check the coherency of early codes, re-code data where necessary and make minor amendments to code titles to better reflect content. A second level review was then completed. This involved reading the entire dataset again to check the relevance of the initial themes and code any additional data that had been missed during earlier coding. Additional coding at this stage was to be expected in light of the organic nature of this type of analysis (Braun Clarke, 2006) however this was minimal. This was possibly due to the successful use of a '*to sort*' code early in the process plus detailed and repeated coding checks during step 2 of the analysis.

Step 5: Defining and naming themes. This was an iterative process, the detail of which is outlined in Table 4. The changes made at each stage are given/briefly explained in italics. In refining the detail of each theme to ensure clear definitions

and names, some minor changes were made to theme/sub-theme titles during this phase (Braun and Clarke, 2006). This occurred during the development of the theme summaries for the *Silence Dialogue* and *Collective Voices* phases of the data analysis cycle that is a feature of The Silences Framework (Serrant-Green, 2011). Thus, in developing succinct but comprehensive theme summaries for review by study participants and ‘*Collective Voices*’ volunteers, it became apparent for example that much of the coded data on work actually concerned or was related to financial issues therefore the title of this sub-theme was amended from ‘*work*’ to ‘*work and finances*’ to reflect this. In addition, some smaller sub-themes/codes were further combined where appropriate and re-named. For example, ‘*Norms issues*’ which also contained the codes ‘*Expectations*’ and ‘*Others’ perceptions*’ were combined and renamed to become ‘*Unusual presentation and recovery journey*’ as indicated in Column 3 of Table 4. Column 5 of Table 4 presents the resulting theme/subtheme structure for the initial study findings.

TABLE 4: Theme development

	Column 1	Column 2	Column 3	Column 4	Column 5
No.	Initial codes list	Initial codes sorting	Code combining	Code combining	Initial findings themes and sub-themes
1.	To sort	<i>Recoded to relevant codes</i>			
2.	Communication	Communication	Communication	Communication	Theme 1: Communication
					Theme 2: Experience of care
3.	Pre-hospital	Pre-hospital	Pre-hospital	Pre-hospital	(a) Pre-hospital
4.	A&E	A&E	A&E	<i>Combined as subtheme 2b</i>	(b) In-hospital
5.	Ward	Ward	Ward	<i>Combined as subtheme 2b</i>	
6.	Post discharge & leisure	<i>Split - leisure recoded future</i>	Post discharge	Post discharge	(c) Post discharge
7	Care overall	<i>Recoded A&E/ward/post discharge</i>			
8..	Errors-practice issues	<i>Recoded A&E/ward/post discharge</i>			
9..	Fragmentation of care	<i>Recoded A&E/ward/post discharge</i>			
10.	Norms issues	Norms issues	Renamed <i>Unusual presentation & recovery</i> Others' perceptions Expectations	<i>Recoded Pre-hospital/A&E/Ward/Post-discharge/Communication/Impact on self</i>	
11.	Expectations	<i>Became child node of Unusual presentation & recovery</i>			
12.	Others' perceptions	<i>Became child node of Unusual presentation & recovery</i>			
13.	Contradictions	<i>Recoded Norms/Expectations/Communication/Experience of care</i>			

					Theme 3: Impact on self
14.	Fear-confidence	<i>Recoded new node Emotional impact</i>	Emotional impact Fear-confidence Control Shock Perception of severity Sense-making Resignation	Emotional impact Fear-confidence Control Shock Perception of severity Sense-making Resignation	(a) Emotional impact
15.	Control	<i>Recoded Emotional impact</i>			
16.	Shock	<i>Recoded Emotional impact</i>			
17.	Perception of severity	<i>Recoded Emotional impact</i>			
18.	Resignation	<i>Recoded Emotional impact</i>			
19.	Sense-making	<i>Recoded Emotional impact</i>			
20.	Positive approach	Positive approach	Positive approach Pos. out of negative Self-care	<i>Recoded Identity</i>	
21.	Positive out of negative	<i>Became child node Pos. approach</i>			
22.	Self-care	<i>Became child node Pos. approach</i>			
23.	Knowledge & information	<i>Became child node Information</i>	<i>Information</i> Knowledge & info Previous h/care experience Subsequent h/care experience	<i>Recoded Communication</i>	
24.	Previous h/care experience	<i>Became child node Information</i>			
25.	Subsequent h/care experience	<i>Became child node Information</i>			
26.	Work	Work	Work	<i>Renamed Work & finances</i>	(b) Work & finances
27.	Identity	Identity	Identity	Identity	(c) Identity
					Theme 4: Impact on others

28.	Support	<i>Renamed Support/others</i>	Support/others Staff	<i>Renamed Practical impact</i>	(a) Practical impact
29.	Impact on others	Impact on others	Impact on others	<i>Recoded Practical/Psychological impact</i>	(b) Psychological impact
30.	Staff	<i>Became child node Support/others</i>			
31.	Use of humour	<i>Recoded Identity/Emotional impact</i>			
32.	Relationships	Relationships	Relationships	Relationships	(c) Relationships
					Theme 5: Moving Forward
			Leisure – <i>from post discharge</i>	<i>Renamed Staying active</i>	(a) Staying active
33.	Complications	Complications	<i>Renamed Residual limitations</i>	Residual limitations	(b) Residual limitations
34.	Concerns for future	Concerns for future	Concerns for future	Concerns for future	(c) Concerns for future
35.	Impact of participation	Impact of participation	Impact of participation	Impact of participation	<i>See section 5.3.8 discussion</i>

3.3.2.2 Phase 2 analysis: Silence Dialogue and draft 1 findings

A short summary of the initial findings in each of the themes was produced for participant review (see Appendix 12) as part of the *Silence Dialogue*: or Phase 2 of the four phase cyclical data analysis process required by The Silences Framework (Serrant-Green, 2011). This was developed from the coding and thematic analysis of the interview data. It proved challenging to develop a succinct but balanced and comprehensive summary that reflected the wide range of experiences and multiple factors highlighted during the interviews. It was important to achieve this however to ensure the content, tone and format of this document was user friendly to encourage and enable study participants, and later the ‘*Collective Voices*’ reviewers to comment.

The purpose of the initial themes summary was to provide participants with a further opportunity to confirm or challenge my initial findings from all 30 interviews combined (Serrant-Green, 2011). The format of the interviews and the use of ‘in-interview’ summaries had already provided study participants with an opportunity to confirm, refute or clarify my understanding of what they wanted to say as individuals. This phase of analysis however was particularly important to prevent further silencing participants during the research process, help address the study aim of enabling a participant centred approach and also to enhance the trustworthiness of the data analysis by providing a second ‘member checking’ process. This was crucial as I was working as a single researcher without the benefit of a formal, second independent analyst which is a widely accepted strategy to enhance the credibility of research findings. Three study participants

had previously indicated they did not want to comment on the initial study findings. Therefore the *initial findings* themes summary was sent to 27 of the 30 study participants with a two week deadline for return. According to predetermined participant preferences, 20 of these were by email and 7 by post (see Appendix 13). This included 18 participants who had accepted the invitation to review the initial findings plus nine who had not expressed a preference either way. Participants were specifically asked to comment on each of the theme summaries individually. The *initial findings* summary was then amended to reflect their feedback and became the *draft 1 findings* summary. This can be found in Appendix 14 with the amendments resulting from this *Silence Dialogue* phase 2 analysis underlined.

3.3.2.3 Phase 3 analysis: Collective Voices and draft 2 findings

This third phase of the data analysis process aimed to expand the scope of ‘user’ voices to include:

‘the social networks of participants or others whose cultural, social or professional situation may impact on the research question.’ (Serrant-Green, 2011, p357).

The purpose was to challenge or support greater understanding of the findings from the participant stories by providing different perspectives on the silences identified in Stage 1 of the study. Therefore, the *draft 1 findings* from the Phase 2, *Silence Dialogue* process, were reviewed by volunteers from social groups that featured in the participant stories as having impacted on their experience of injury

and recovery. These volunteers were recruited using already established research and patient and public involvement contacts at the supporting NHS Trust and an NHS ambulance service.

Five volunteers who had experience of caring for a relative with hip fracture were invited to review the *draft 1 findings* summary (Appendix 14). These individuals had experience of caring for elderly parents with hip fracture not the young age group that was the specific focus of this study, but were able to comment on the findings from a relative/carer perspective. In addition, seven healthcare professional volunteers working in relevant areas of the hospital were identified by the local Trust trauma research co-ordinator supporting the study who also collected the comments on the *draft 1 findings* from these volunteers on my behalf. Following the appropriate ambulance Trust research governance approval (see Appendix 16), the *draft 1 findings* summary (Appendix 14) was also sent to all paramedics in one NHS ambulance Trust. Unsurprisingly, paramedics featured in almost all the patient stories as hip fracture is a serious injury requiring urgent hospital care. Finally, the critical friend to the study also agreed to review the *draft 1 findings* summary. The *draft 1 findings* were then revised in response to all the 'Collective Voices' feedback, to arrive at *draft 2 findings summary* (see Appendix 17).

3.3.2.4 Phase 4 analysis: Researcher reflection and final study outputs

This fourth and final phase comprised my critical reflection on the findings from the preceding three phases of analysis and resulting study theme summaries to arrive at and present the final study outputs. These four phases enabled the continuous revisiting and ongoing development of the study findings. This enabled the integration of the wider perspectives of members of the social network groups that participants identified, which is a key feature of The Silences Framework (Serrant-Green, 2011). The final study outputs arising from this final phase of analysis are presented in the following findings chapter.

3.4 Trustworthiness

Lack of rigour is a common criticism of qualitative research (Gray, 2014). There is however ongoing debate regarding whether the traditional concepts of reliability and validity usually associated with quantitative research are appropriate for qualitative researchers (Polit and Hungler, 1999; Huberman and Miles, 2002). As qualitative research has developed and become more widely accepted, the notion of an equivalent framework for ensuring robustness emerged. Holloway and Wheeler (2002) claim qualitative researchers define rigour as a means of demonstrating research quality and integrity. The term trustworthiness, which encompasses issues such as credibility, dependability, transferability, and confirmability serves this purpose (Gray, 2014). Therefore to reflect its qualitative nature, the trustworthiness framework proposed by Lincoln and Guba (1985) is used below to frame the discussion of the quality assurance aspects of the study.

Credibility

This concerns the degree of confidence in the ‘truth’ of the study findings. Four of the five potential strategies suggested by Lincoln and Guba (1985) to enhance credibility were employed. These were:

1. periodic in-interview summaries provided participants with early an opportunity to confirm or correct my understanding of what they shared during the interview;
2. all participants had the opportunity to review and comment on the initial findings/draft themes developed from the Stage 1 analysis of the data from all 30 interviews. This method is recommended by Polit and Hungler (1999) and Connelly and Yoder (2000) and represents phase 2 of the data analysis in which the researcher uses the participant feedback from this process to generate the *draft 1 findings*. This is the *Silence Dialogue* detailed previously in section 3.3.2.2 of this chapter;
3. the phase 3 or ‘*Collective Voices*’ stage of The Silences Framework (Serrant-Green, 2011) data analysis process (detailed in section 3.3.2.3 of this chapter) enabled members of the social networks identified by participants to further comment on the study findings. This feedback then informed the development of the *draft 2 findings*;
4. all participants had the opportunity to review and comment on the final study outputs which were the result of researcher reflection on and further analysis of the *draft 2 findings* developed from the *Collective Voices*

feedback, the fourth and final analysis phase of The Silences Framework (Serrant-Green, 2011).

The aim of these strategies was to prevent compounding or further silencing study participants as a result of the research process (Serrant-Green 2011). Throughout each stage, the language and terminology used by participants was employed to ensure the findings remained as close to what participants said as possible. This analysis process also highlights the value placed on taking account of individual perceptions from multiple perspectives to increase the credibility of the findings. In addition, I actively sought to build and maintain trust and rapport with participants throughout the research process as a means of facilitating understanding and the co-construction of meaning between myself as the researcher and the participants. This is identified by Lincoln and Guba (1985) as a means of encouraging openness and honesty by participants to enhance the credibility of the data and subsequent analysis which they term prolonged engagement.

Finally, although not specifically required by the Braun and Clarke (2006) thematic analysis framework, searching for and analysing negative or deviant cases in the data was a further strategy undertaken to enhance the credibility of the study (Green and Thorogood, 2014).

Dependability

The term dependability describes the consistency and accuracy of qualitative research processes and findings (Guba and Lincoln, 1989). This was addressed by making all the documents used to support the research and decision making processes available for scrutiny. I also undertook all the interviews and most of the transcribing to maximise consistency in these processes. I provided guidance for other transcribers to ensure consistency of approach and format of the resulting transcripts. I also checked all transcripts I had not myself transcribed against the original audio recordings and amended where necessary.

Transferability

Thick description was the main strategy used to enhance the transferability of the study. This involved providing enough detail to enable others to evaluate the extent to which the conclusions drawn from the study are applicable to other settings, situations, times and people.

Confirmability

This concerns the neutrality of the research. Therefore, whilst recognising the value laden nature of inquiry, a clear description of the research process and decision making throughout supports the confirmability of the study by enabling the reader to make a judgement on researcher influence. For example, using a structured approach to data analysis based on Braun and Clarke (2006) and providing a detailed description of the process of developing initial codes and

subsequent 'collapsing' of these to form categories and then themes from the data (see Table 4), provided a transparent audit trail. This enhances the quality of the research design by enabling it to be repeated rather than replicated as would be the aim for a quantitative study (Holloway and Wheeler, 2002). In addition, demonstrating researcher reflexivity, for example by using a reflective journal throughout the study and reporting on researcher positionality were additional strategies designed to enhance this aspect of the study's quality.

3.5 Ethical Considerations

3.5.1 Risk/benefit assessment

The study was scrutinised and approved by the Wolverhampton University research governance and ethics committee (Appendix 5), the NHS National Research Ethics Service (NRES) (Appendix 6) and the Research and Innovation (R&I) Department of the NHS Trust through which study participants were recruited (Appendix 7). The purpose of these processes was to evaluate the potential risks to researcher and participants of taking part in the study balanced against the likely benefits resulting from it (Polit and Hungler, 1999). The risks were judged minimal, as indicated by the suitability of the study for NRES approval via the Proportionate Review process and potential benefits for future young people with hip fracture and the development of healthcare services for this client group were judged worthwhile.

No physical or emotional risk was anticipated although measures were in place to deal with such events (DH, 2005b). This issue was given due consideration and information on safeguards was provided in the Participant Information Sheet (Appendix 3) (Connelly and Yoder, 2000). For example participants had the opportunity to have their GP informed of their participation in the study and a copy of the GP information letter/information sheet can be found in Appendix 10. I also had information on appropriate local sources of support to which I could refer participants should they become distressed in recounting their experiences or require follow up support. As a Registered Nurse, I had additional professional responsibility and accountability in relation to the study (NMC, 2008; NMC, 2015; DH, 2005b). Participants were notified of this and that any bad practice discovered would result in my seeking guidance on appropriate action from the research supervisors and that any evidence of immediate harm would be brought to the attention of those responsible. As a novice researcher I accessed appropriate support from the supervisory team throughout the research process.

Practical measures taken to ensure researcher safety included careful timing and location of interviews and notifying colleagues of appointments (Rubin and Rubin, 1995). Face to face interviews were therefore undertaken on NHS Trust premises during office hours, in quiet but not secluded locations in which colleagues were aware of my activity and schedule. Telephone interviews were undertaken in a private room in my own home to ensure confidentiality although this also meant that many of the safeguards necessary to ensure practical researcher safety when undertaking face-to-face interviews were not necessary.

In addition, participants were informed in the Participant Information Sheet and at the start of the interview that they could stop at any time. I also routinely de-briefed participants post interview. As outlined in the interview guide (Appendix 1) de-briefing included a number of actions to ensure interviews ended in an orderly fashion, giving both parties a positive sense of achievement whatever the interview content (Gray, 2014).

First, I verbally signalled that the interview was coming to a close (Brinkman and Kvale, 2015), asking at least once more if the participant had anything further they wished to add (Denscombe, 2003). Second, I provided a final overall summary of what I had understood from what the participant had shared. This provided each individual with a further opportunity to confirm or clarify my understanding (Brinkman and Kvale, 2015). This final summary supplemented the in-interview summaries provided intermittently during each interview as a means of member checking. It also provided a further opportunity to re-iterate the availability of follow up support and contact information for local support services as necessary. This was offered routinely to all participants but was particularly important for individuals who had recounted traumatic experiences or become emotionally upset during the interview. Finally, I thanked each individual for participating in the study and outlined the next steps such as when the initial themes summary would be sent to them for review and whether or not they wished to review the final report (Gray, 2014). I also ensured each participant had my contact details and understood that I would remain contactable for signposting to follow up support if necessary.

3.5.2 Informed consent

This is a key foundation of ethical research (DH, 2005b). Therefore having received the Participant Information Sheet (Appendix 3), agreed to take part in the study (Appendix 4) and had the opportunity to ask questions, participants were asked to sign a consent form (Appendix 8) immediately prior to interview.

Participants choosing telephone interview all returned the completed consent form from the study information pack prior to interview. I re-checked this and continuing consent verbally before beginning each telephone interview. The open-ended, emerging and relatively unpredictable nature of narrative interviews however, can make informed consent more complex (Robley, 1995). Thus, a process-informed consent approach by which consent was re-evaluated throughout the research process (Streubert and Carpenter, 1999) supplemented this. I achieved this by taking notice of any non-verbal cues and periodically checking verbally with participants during interview that they were happy to continue. This was particularly so during times when participants appeared upset or emotional such as when recounting difficult experiences. This was more difficult during the telephone interviews when visual cues were not available and required particularly acute active listening skills and reflexive interpretation of silence throughout.

3.5.3 Confidentiality and anonymity

The allocation of a unique code, using the participant's initials helped to ensure participant confidentiality and anonymity. In addition, care was taken to ensure participants could not be identified by other characteristics that may be unique to them. The master list of participants/unique identifiers was stored securely,

separate to the data and accessible only to the researcher and the NHS Trust gatekeeper. All study materials will be kept for a minimum of two years from the end of the study in accordance with the University of Wolverhampton policy. Participants were informed of their right to withdraw at any time without reason and that this would result in the destruction of data gathered concerning that individual at the point of withdrawal.

Interviews were transferred from the digital recorder then securely stored in NVIVO 10 as soon as possible. I used the participant ID code during the recording and avoided using the participant's name where possible. The purpose of this was explained to each participant at the start of the interview so as not to jeopardise rapport. Where names of participants, other individuals or specific hospitals were inadvertently mentioned during interview, these were removed during the transcription process. Interview data and associated materials were password protected and accessible only to me and the research supervisors if required. My employer (Teesside University) provided back up facilities and IT support/security.

3.6 Chapter summary

This chapter has outlined in detail the data collection and analysis processes that were undertaken to explore the perceptions of study participants and those with an impact on their recovery experiences to arrive at the final study outputs. In doing so it has addressed the relevant ethical considerations and outlined the strategies used to ensure the trustworthiness of the research. Data analysis is a key aspect

of any study and the integrated application of thematic analysis within the four stage cyclical approach to data analysis required by The Silences Framework has been detailed to enable the reader to make a judgement on the appropriateness of the analysis process. The following chapter presents the final study outputs resulting from this process.

Chapter 4

Stage 3(ii): Voicing Silences (Findings)

4.1 Introduction to the chapter

This chapter presents the findings of the study and reflects Stage 6 of the Braun and Clarke (2006) thematic analysis framework. This is their final stage of data analysis which requires the selection of data extracts to evidence the themes identified within the data and compilation of the final report. The findings presented here are the result of the application of the four phase cyclical data analysis process within which this thematic analysis was undertaken as outlined in Chapter 3. These are:

- Researcher review and *initial findings*;
- Participant review and *draft 1 findings (Silence Dialogue)*;
- *Collective Voices* review and *draft 2 findings*; and finally,
- Researcher reflection to arrive at the *final study outputs*.

This cyclical data analysis and continuous revising and developing of the findings by integrating relevant user and public perspectives is an essential process when using The Silences Framework (Serrant-Green, 2011). It enables the study to remain close to the philosophical underpinning of the Framework and also, reflects the original study aim.

The chapter is structured in seven sections. The first two provide information on the participant demographics and background information and an overview of the characteristics of *Silence Dialogue* and *Collective Voices* reviewers. The following five present the findings by theme. The first cross-cutting theme, *Communication* is followed by a further four main themes: *Experience of care*, *Impact on self*, *Impact on others* and *Moving forward* along with their associated subthemes.

4.2 Participant demographics and background information

The purpose of including participant demographics is to provide an overview of participants and to help contextualise the responses. This information was self-reported by participants during the secondary screening and recruitment process or subsequent interview. Table 5 provides a breakdown of time since injury, indicating that just over half the participants were five years or more post-injury and of these three were 10 years post fracture.

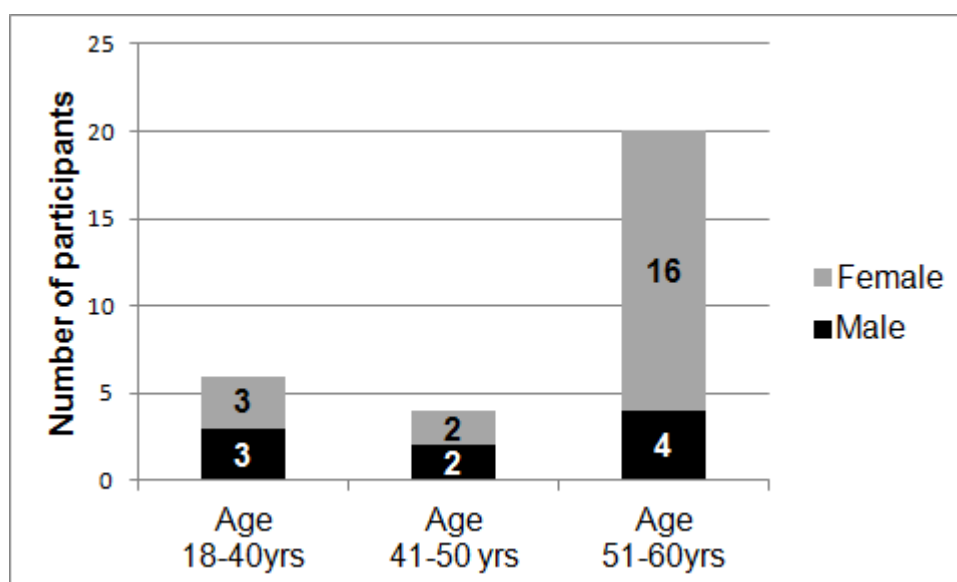
TABLE 5: Time since injury

Time since injury	No. participants
1-4yrs	14
5-9yrs	13
10yrs	3

Figure 2 demonstrates that a third of the study participants were under 50 years of age with the remaining two-thirds aged 50-60 years at the time of injury. Two

thirds of participants were female. The sexes were evenly represented in the 18-40 and 41-50 age categories but females outnumbered males in the 51-60 category by four to one.

FIGURE 2: Participant overview by age category and sex



The circumstances in which the participants were injured are summarised in Figure 3. One third fell outside in a public thoroughfare whilst undertaking their everyday activities. These included shopping, meeting a friend in town and helping a work colleague to move equipment. A further seven participants fell in their home environment. Their accidents included falling off a sofa whilst answering the telephone, tripping over trouser bottoms whilst answering the door, slipping off a kitchen work surface after closing a window and falling out of a wheelchair whilst straightening curtains. The remaining thirteen participants fell when undertaking leisure activities. Examples of these included whilst: with friends in a café, walking the dog or taking a family stroll, at a social event, ice-skating, cycling, running and visiting a garden centre.

FIGURE 3: Place of fall

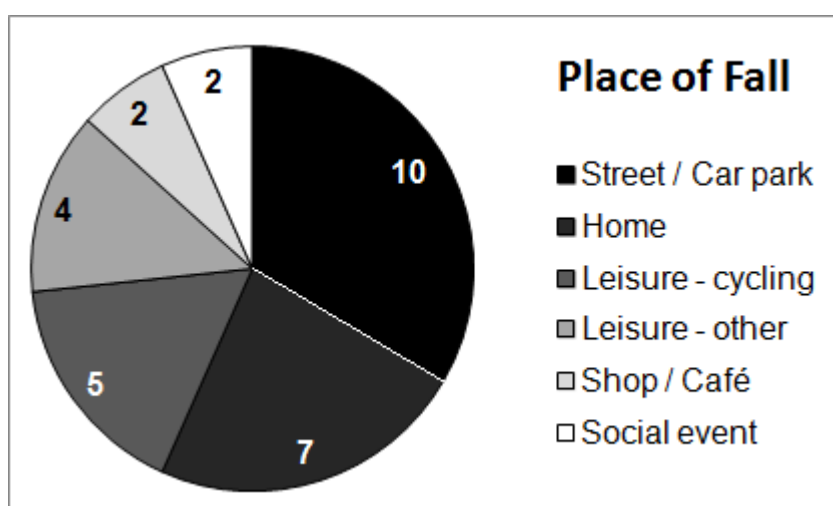


Table 6 provides an overview of additional participant characteristics which are summarised below. At the time of injury, one individual was retired, another was unemployed and another was unable to work due to a disabling hereditary condition. A further participant was self-employed running a car repairs business and three kept home. The remaining 22 individuals, over two thirds of the participant group, were employed, mostly full-time. These included a wide range of occupations such as: airline pilot, retail supervisor, office administrator, factory worker, education manager, nursery nurse, pharmacy and pharmaceuticals laboratory staff, and healthcare professionals i.e. radiographer, physiotherapist, community midwife. Eight of the 30 participants i.e. almost a third, had dependents. These included elderly parents and/or young children. It emerged during interview that one participant was a single parent although this information was not actively sought from participants. Just over a third lived alone and for these individuals in particular the welfare of pets after the accident and during recovery was a key feature of their stories.

TABLE 6: Overview of participant characteristics

Participant ID	Sex	Age at injury (years)	Time since injury (years)	Smoker	Alcohol intake	Lives alone	Dependents	Occupation	pre fall health conditions	Site of fall	Conditions found post injury	Conditions developed since injury	Type of surgery
02. RB (117)	F	51-60	5 -9 years	N	WRL	N	N	Housewife-husband	None	outside	Osteoporosis	Parkinsons disease	Not known
03. SF (10)	F	51-60	1-4 years	Y	WRL	Y	N	Education manager	prem menopause	from step - kitchen surface - wheelchair	Osteopenia	Polymyalgia rheumatica Temporal arteritis	Screws/IM nail
04. SJP (16)	F	51-60	10 years	N	WRL	N	N	Radiographer	Ulcerative colitis	cafe/shop	None	None	THR
05. GT (339)	F	29-40	1-4 years	N	ORL	N	N	Nursery nurse	None	at home	None	None	THR -multiple
06. PAS (114)	F	51-60	5 -9 years	N	ORL	N	N	Office worker	Thyroidectomy	at home	None	CVA	Pins
07. JFS (25)	F	41-50	5 -9 years	N	WRL	Y	Children	Community midwife	None	outside	CKD/bipolar	None	Screws/IM nail
08. FmC (171)	F	51-60	1-4 years	N	WRL	Y	N	Nursery nurse	None	inside venue	Osteoporosis	None	THR
09. PW (244)	M	29-40	1-4 years	Y	ORL	Y	N	Chef	None	outside	B12 deficiency	Embolisation	THR
10. JD (331)	F	51-60	1-4 years	N	WRL	N	N	Office worker	None	outside	Osteoporosis -	None	THR
11. GB (11)	M	51-60	1-4 years	N	WRL	N	N	Retired	Knee problem - RA as a child	outside	none	None	DHS
12. PB (305)	M	51-60	1-4 years	N	WRL	N	N	Factory worker	2 previous sports related fractures	cycling	None	None	Screws/IM nail
13. AEA (20)	F	51-60	10 years	Ex	WRL	Y	N	Warden	None	at home	Osteoporosis	None	Screws/IM nail
14. LSS (178)	F	29-40	5 -9 years	N	WRL	Y	N	Physiotherapist	None	outside	Osteopenia	None	DHS
15. VJJ (83)	F	51-60	5 -9 years	N	WRL	Y	N	Office worker	None	at home	Osteoporosis	None	Multiple
16. DH (335)	F	51-60	1-4 years	Ex	Teetotal	N	Children	Pharmacy worker	Possible bone density issues	outside	Osteopenia	None	Repair - type unknown
17. JP (307)	M	51-60	1-4 years	N	WRL	N	Parents	Airline pilot	None	cycling	None	None	DHS
18. DM (115)	F	51-60	5 -9 years	N	WRL	Y	N	Office worker	None	outside	Osteopenia	None	Screws/IM nail
19. MES (150)	F	51-60	5 -9 years	N	WRL	N	N	Office worker	None	outside	None	None	Pins
20. HEW (237)	F	51-60	1-4 years	Ex	WRL	N	N	Office worker	Osteopenia	outside	Osteopenia	None	Screws/IM nail
21. MS (313)	M	51-60	1-4 years	N	WRL	N	Not known	Self-employed	None	cycling	None	None	Screws/IM nail
22. PS (148)	F	51-60	5 -9 years	Ex	WRL	N	N	Office worker	None	from step - kitchen surface - wheelchair	Osteoporosis	None	Plate
23. AVS (289)	F	29-40	1-4 years	Ex	Teetotal	N	N	Housewife-husband	Degenerative neuro disorder	from step - kitchen surface - wheelchair	None	None	Screws/Intramedullary nail
24. PST (322)	M	41-50	1-4 years	N	WRL	N	Children	Retired police - insurance investigator	None	cycling	None	None	Pins
25. RP (167)	F	51-60	5 -9 years	N	WRL	Y	N	Retail supervisor	None	outside	None	None	Part replacement
26. MW (63)	F	51-60	5 -9 years	N	WRL	Y	Pets	Housewife-husband	Multiple	outside	Osteoporosis -	None	THR
27. ST (7)	M	41-50	10 years	N	WRL	N	Children	Self-employed	None	skating	None	None	Pins
28. PBW (72)	M	29-40	5 -9 years	N	WRL	N	N	Science labs	None	cycling	None	None	Pins
29. GA (84)	M	29-40	5 -9 years	Ex	ORL	N	Children	Pharmaceutical company	None	running	None	None	DHS
30. JH (69)	M	29-40	5 -9 years	Ex	WRL	N	N	Disability	Osteogenesis imperfecta	outside	None	None	Pins
31. LL (241)	F	41-50	1-4 years	Y	WRL	Y	Parents	Unemployed	Cerebral palsy	cafe/shop	None	None	Multiple
Key WRL= alcohol within recommended limits ORL = alcohol outside recommended limits Ex = ex-smoker THR = total hip replacement DHS = dynamic hip screw CVA = cardio-vascular accident Outside = public thoroughfare CKD = chronic kidney disease IM nail = Intramedullary nail RA = Rheumatoid Arthritis													

The surgical procedures participants underwent were not a key focus of the study. Nevertheless all but one mentioned the type of surgery they had in their story. As indicated in Table 6 participants had undergone a range of surgical procedures. Three had had more than one operation and seven had had a total or partial hip replacement because surgical repair, which is the preferred option in people of this age (Thuan and Swiontowski, 2008), had not been possible. Hip replacement in this age group is normally required because of the extent of the original injury or post-operative complications.

Five of the 30 participants knew aspects of their past medical history may make them more prone to fracture. One was conscious of the effects of non-weight bearing due to extended wheelchair use as a result of a degenerative neurological condition and another, the fracture implications of his hereditary condition (osteogenesis imperfecta). A further participant stated that early menopause had put her at greater risk and another had been previously diagnosed with osteopenia. A fifth individual was aware she may have some bone density issues having had previous fractures but did not think this increased her risk. One participant had multiple health conditions, but none that she thought put her at greater risk of fracture. Nineteen participants however, almost two-thirds of the study group, answered 'none' when asked about any medical conditions they had or that may make them more prone to fracture. Three participants were current smokers and a further seven categorised themselves as ex-smokers. The other two-thirds of the study group said they had never smoked. Based on self-reporting of average weekly alcohol intake, four participants indicated an intake over the

then recommended weekly limit of 21 units for men and 16 units for women, with a further 24 within recommended limits plus two who were teetotal.

Previously undiagnosed conditions were found in almost half of the participants as a result of their fall. This was mostly osteoporosis (seven participants) and osteopenia (five participants), which are associated with increased fracture risk. A further person was found to be vitamin B12 deficient and another discovered previously undiagnosed bipolar disorder and chronic kidney disease, the latter of which is also associated with reduced bone strength. Four participants highlighted medical conditions developed since the hip fracture as an integral part of their stories. These illnesses included: Parkinson's disease, embolisation, cerebrovascular accident, polymyalgia rheumatica and temporal arteritis.

4.3 Characteristics of Silence Dialogue and Collective Voices Reviewers

The *Silence Dialogue* review comprised twelve responses from study participants who had reviewed the *initial findings* summary (Appendix 13). A further individual replied indicating his comments would follow but these were never received. All the participant comments received during this process are collated in Appendix 18. In addition a total of 13 *Collective Voices* reviewers provided feedback on the *draft 1 findings* summary (Appendix 14). This included three relatives/carers of people with hip fracture, two paramedics, the patient critical friend to the study and seven hospital-based healthcare professionals comprising:

- two junior doctors
- a radiographer
- a physiotherapist
- an A&E nurse
- a staff nurse (orthopaedics)
- a nurse practitioner / specialist nurse

One of these reviewers recorded their role as '*osteoporosis lead nurse*'. Following a process of elimination based on the job roles of reviewers outlined above by the NHS Trust contact and the other responses received, it appeared this reviewer was the A&E nurse, perhaps with a special interest in or responsibility for osteoporosis. One paramedic was unable to comment on Themes 3 (*Support mechanisms and Impact on others*) and 4 (Moving forward) stating: '*I have not had any involvement in this aspect of care*' (Paramedic 1). This is not surprising given the nature of the paramedic role, which is primarily first responder, acute care focused.

Throughout this process however, a very clear consensus emerged from *Silence Dialogue and Collective Voices* reviewers. The reviewers consistently confirmed the findings at each stage of the analysis cycle. In the small number of instances where a reviewer highlighted an issue they felt was not apparent in the theme summaries, this was reflected on by the researcher and the findings reviewed in the light of this. For example:

'I could not find any support appropriate for a wheelchair user. Even my discharge was delayed due to the specific hoist being unavailable'
(AVS)

The lack of support for disabled participants identified by this individual during the *Silence dialogue* process was not explicitly mentioned in the *initial findings* summary (Appendix 12). The findings summary was therefore revised to reflect this and where relevant, other reviewer comments, before proceeding to the next phase of analysis each time. The changes made to the findings themes summary documents as the phases of analysis progressed are underlined in Appendix 14 (following silences dialogue - participant review) and Appendix 17 (following Collective Voices review). In each case, although the issue raised by a reviewer was not explicit in the associated themes summary it had been identified in the actual data analysis. Thus the substance of the *final study outputs* changed very little from the *initial findings* although some aspects of the study findings were more explicitly highlighted in the final study outputs. This included drawing out the findings regarding *Communication*, which were originally incorporated as a sub-theme in the *Experience of care* theme to present as a cross-cutting theme in the final study outputs. The *Silence Dialogue* and *Collective Voices* are therefore presented for 'hearing' as an integral part of the following theme sections.

The findings presented in the initial cross-cutting theme and following four main theme sections therefore represent the situated views of the study participants derived from a thematic analysis of 30 narrative interviews. These have been confirmed and further refined following review during the cyclical analysis process

by the participants themselves (*Silence Dialogue*), individuals belonging to wider social networks that featured in the participant stories and the patient critical friend to the study (*Collective Voices*) during the cyclical analysis process. In keeping with Braun and Clarke (2006), the findings in each of these themes and their associated sub-themes are evidenced using data extracts from the participants' stories.

4.4 Findings by theme

The following subsections present the findings in four main themes which are situated within the first cross-cutting theme:

Cross-cutting Theme 1: Communication

Theme 2: Experience of care

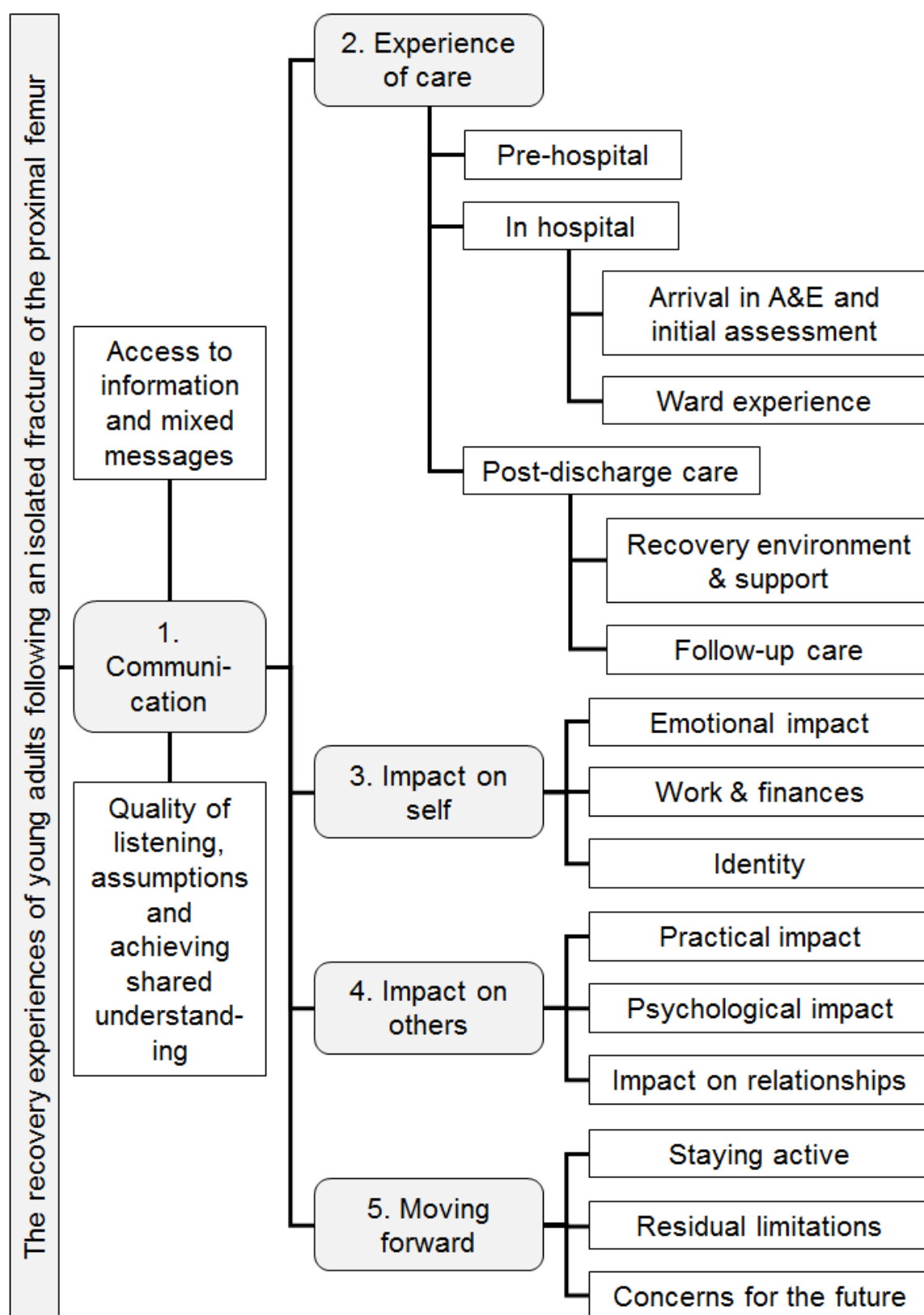
Theme 3: Impact on self

Theme 4: Impact on others

Theme 5: Moving forward

Figure 4 provides an overview of the final themes and their associated subthemes. These represent the core elements of a multi-faceted perspective on the injury and recovery experiences of young adults with an isolated hip fracture following a minor fall.

FIGURE 4: Overview of final study outputs themes and sub-themes



4.4.1 Theme 1: Communication

Communication with others was a crucial support mechanism identified by participants. This issue was identified as a crosscutting theme as it pervaded many other aspects of the recovery experience. The findings in this theme concern the quality of communication experienced by participants which is addressed in two main sections. The first discusses access to information and the mixed messages participants experienced. This includes the sources and quality of information participants used to inform their approach to recovery and the effectiveness of these. The second section outlines: the impact the quality of listening, prior assumptions and achieving shared understanding had on participants' recovery experiences.

4.4.1.1 Access to information and mixed messages

Receiving good information from healthcare staff from the outset was an important part of recovery and formed a key part of all narratives. Other positive features of supportive communication by staff were appropriate encouragement, reassurance, explanation and the ability to put the participant at ease. These were further enhanced by staff continuity and participants knowing who to ask for support. Where these were not achieved individuals reported feeling less supported. Realistic guidance on what they were facing in terms of treatment and the difficult nature of the physical and psychological journey back to full fitness was also highlighted as important. Perhaps unsurprisingly participants did not appreciate what they perceived as unfounded negativity or premature judging of negative outcomes.

Participants reported a mixture of good and poor information provision from ambulance, hospital medical and nursing staff, GPs and physiotherapists. Pharmacists were the only group participants described having had exclusively positive communication with although references to this professional group were much less common. The narratives revealed very diverse participant experiences of access to information regarding their surgery, expected post-operative journey and longer-term impact although many reported being very well informed:

‘...they explained everything that was going to happen...this that and the other...showed me what it was...brilliant...’ (PW)

Participants were mostly very aware of the risk of brittle bones, often commenting on either the presence or absence of bone density screening received following a previous fracture. A number had previously been told their bone density was normal. Others however were aware of being at potentially greater risk as a result of for example, early menopause, family history of osteoporosis or prolonged non-weight bearing as a wheelchair user.

Some participants recounted being well informed throughout although many reported variable quality of communication and access to information at different points of the injury and recovery journey. For example, having totally underestimated the severity of the injury, one individual only realised she needed surgery when she asked why she was being weighed, and another recounted:

‘...first I knew was someone came in with an ECG machine which I thought was a bit strange...then they told me why I was having...and ECG...’ (JFS)

An awareness of different staff communication roles was highlighted by one participant who noted a change from: *‘...very chatty...to...I had to be told by a doctor....’* (JP) once it became apparent the injury was serious. This experience was specifically verified by a *Collective Voices* reviewer who commented: *‘...a lot of our care is just about surface chatter and gentle reassurance...’* (Radiographer). Whilst this cannot represent the views of all radiographers, this comment linked to other aspects of this reviewer’s feedback regarding the process-related, task orientated nature of diagnostic imaging practice. Those in their care may or may not be aware of this or its potential impact on the quality of information giving. Thus, whilst the participant above understood and accepted the reason for a change of staff attitude toward him, others had a more negative experience. This included requests for assistance being ignored until visitors arrived:

‘...I thought you so and so...I’ve been asking you for best part of an hour...you ignore me...as soon as I get a visitor...ooh let’s get you back in bed... when it was visiting time it was different it was all smiles and everything in the garden’s rosy but it wasn’t like that....the rest of the time.’ (RP)

Participants often expected more than access to information and explanation but to be involved in shared decision-making as this extract illustrates:

‘...so then got taken down to...the anaesthetic room...but it was just kind of like the shock of [pause] didn’t get discussed what sort of anaesthetic you wanted or anything...just this is what we’re going to do and explained it [laughs]...’ (LS)

Information communication is a complex issue however and what may commonly be considered positive communication practice i.e. giving patients choice is not straightforward as this extract illustrates:

‘...the surgeon...said do you want a hip replacement or...screws...well it’s one thing to know a few weeks in advance...you’re at home and you can... look it up...but when you’re lying there...doped up with morphine... I just said...what would you recommend...I had to put my absolute faith in him giving me the right advice...I just wanted to get well and get out.’ (SF)

The comment above illustrates the importance of context. This participant’s perceived vulnerability and lack of information prevented her active participation in the treatment decision and meant being given a choice of treatment was not helpful. Thus, despite appreciating the open communication from staff and information received, the distressing effect this had on them was noted by some participants:

‘...told me about the injury [pause] which weren’t very good...quite distressing really...doctor came and...explained about having a [pause] hip replacement [pause] if they couldn’t repair the...fracture...that was a low point...you realise...it’s a curious place to heal...’ (MS)

These comments illustrate that the impact of the information received varied from one individual to another. Some were left with unmet expectations whilst being better informed created additional anxiety for others.

Although access to information from staff was important, participants identified various types of knowledge as having an impact on their initial and longer-term recovery. This included their own previous knowledge, that of family and friends and other wider sources of information. This was often but not always healthcare related. Knowledge gleaned from pre-injury healthcare experience emerged in two domains namely, personal experience, either as a patient and/or as part of their work; and the experiences of friends or family. Participants who were or had worked as healthcare practitioners i.e. radiographer, physiotherapist, community midwife, healthcare assistant, member of the emergency services, or who had a specific interest in sports science, drew on this knowledge: They recounted how it had enabled them to recognise the signs of hip fracture quickly:

‘...the foot [pause] is everted the leg’s gone up [pause] I says I know those are...classic signs...I used to work as a radiographer.’ (SJP)

Prior healthcare knowledge also instilled a sense of confidence as this participant recounts:

‘...I’ve come into contact with ambulance crew and staff and...it’s not the first time I’ve been into A&E you know...it holds no fear for me...’ (PST)

As a result, previous professional experience of healthcare generally prevented the fear of the unknown reported by other participants. One physiotherapist participant however, despite using her knowledge of the different types of physiotherapy to access specific treatment when it was not forthcoming, also specifically highlighted the limitations of her knowledge, reflecting on the limited experience of professionals generally regarding this injury in young people. She also described using her knowledge of physiology to question the validity of the information she received. As a result she was sceptical of the normal vitamin D level reported. She believed positive but temporary lifestyle changes had resulted in an artificially normal reading that was not representative of her usual routine when working full time. Another participant, experienced in working with the elderly, expressed empathy with older people who just 'gave up' following a similar injury whilst recounting the challenges of her extended and difficult recovery at a much younger age.

Participants from non-healthcare professional backgrounds also drew on their professional knowledge. For example, a mechanic learned about the technicalities of the surgical options and how various prostheses functioned. A small number of participants had not experienced previous hospital admission and did not therefore have their own experience to draw on. Previous personal experience of injury or other healthcare conditions however was a feature of many of the narratives. These experiences varied widely and included previous long-term health conditions such as diabetes or polycystic kidney disease, acute care experiences such as lobectomy, pneumonia or other more minor fractures. These experiences

went back to childhood for some participants but were within six months of the hip fracture for others.

Participants also used knowledge gleaned from the experiences of friends and family. This sometimes led to what was described as a more balanced perspective, such as one individual who compared his own hip fracture to his two year old child's experience of cancer. Participants often compared their own recovery to that of friends with similar injuries or elderly relatives with hip fracture. This resulted in quite different perspectives. For example the individual below was left questioning why she had had internal fixation surgery rather than a hip replacement. Based on her experience of family and friends, she associated hip replacement with a much shorter recovery period but appeared unaware of the reasoning behind her particular treatment:

'...a mend was what they usually do but if you're up and walking...in 5 weeks with a replacement why have they done this to me?' (DH)

Others however recognised the longer-term benefits of preserving their own hip where possible:

'...I'm quite relieved...still got my...natural hip in there...mum's friends have... had hip replacements...didn't quite work as well as they thought...gonna last 10 or 15 years but...has to be the possibility once you have major surgery down there... you're gonna have problems...it wears out or dislocates...the fact I didn't get exposed to any of that...is a great source of relief to me...' (JP)

Whilst healthcare staff were a key source of information on the type of surgery, recovery process and longer term implications, participants also actively sought information from the television and online. This was often used to support their own recovery and also to enhance their general medical knowledge for the future. For example, one participant began deliberately watching medical programmes on television to increase his knowledge of healthcare emergency recognition, having not initially recognised the severity of his injury and subsequently discovering he could have died. Most individuals used the Internet and other media sources to gain knowledge of a wide range of personal care issues. This was often in response to a lack of or conflicting information from professionals. These included: side effects of medication, technicalities of their surgery and average lifespan of prostheses, causes of the injury and rehabilitation information. The knowledge gained sometimes surprised individuals by challenging their assumptions:

‘...you just think it's all precision and computers and lasers and stuff now and he's got a bloody great mallet from B&Q by the looks of it...I thought well it really wasn't clever watching that...’ (PW)

On the other hand, participants also recounted a healthy scepticism of this type of knowledge, often noting that where this conflicted with clear information provided by their own doctor, it was the medical professionals' advice they would follow.

Although participants recounted many examples of knowledge gained from a range of sources, this experience was not universal and a lack of crucial information was also noted by some. These included what to expect in terms of

treatment and recovery both initially and in the longer term and may be why participants sought and used information from other sources. One 33 year old participant with the bone density of an 80 year old described not needing the generic healthy eating advice provided because of her background knowledge, but being disappointed at the lack of holistic advice to enable her to maximise her bone protecting diet whilst avoiding the increased cardiovascular risk associated with a higher dairy intake. However, deficits in the information available to participants concerning wider social as well as healthcare issues were also apparent:

'...I'm hoping I'll get some assistance putting in this new bathroom because...the cost implications are quite significant...I don't know if these grants are available...' (GT)

This 33 year old participant had been unable to weight bear, work or live with her husband in her own home for almost 18 months. She needed supported access to her upstairs flat and bathroom alterations because of ongoing complications and mobility issues, which she still had no idea how she would fund.

Access to information often also resulted in conflicting messages from staff. These ranged from relatively minor issues such as uncertainty and differing advice regarding suture removal to much more significant issues such as the likelihood of further surgery and conflicting advice regarding rehabilitation:

‘...you were seeing somebody different every time...one person telling me to partially weight bear...somebody [else] telling me to bear as much weight as I could...they’re two extremes...it’s not even like they were close...how are you supposed to have confidence when you’re...getting such mixed messages... all the time...’ (SF)

As the comment above illustrates these mixed messages from the professionals they relied on left participants feeling frustrated and vulnerable. Where this concerned differing advice regarding bone density it also impacted on their long term care and potential risk of further fracture.

4.4.1.2 Quality of listening, assumptions and achieving shared understanding

The effectiveness of communication and its subsequent impact on participants’ experience of care was often dependent upon the quality of listening demonstrated by those they came into contact with. This finding primarily concerned communication with healthcare staff. Examples of positive care experiences participants’ attributed to good listening included being treated as an individual and being listened to when reporting unusual pain or an uncommon allergy. In one case this concerned significant keloid scarring requiring further surgery as a result of the previous inappropriate use of dissolvable sutures:

‘...he listened...that is a novelty...actually did something with that information not just [pause] listened and went oh right...that’s very rare never heard about that one before we’ll just stick them em in...and I’ll see you in a year to cut it out again... absolutely spot on...’ (AVS)

However, the positive experience described above was by no means universal with many participants recounting the negative impact of poor quality listening on their experience of care and recovery. Examples included staff ignoring reports of post-operative pain that for the participant below eventually required referral to a specialist hip surgeon and further surgery:

'...I used to get really down because nobody seemed to be listening... kept saying I was in...really bad pain...my family could see I was...but they [the hospital] didn't seem to be listening...I was in and out for check-ups you know...2 minutes...' (LL)

and the impact poor listening had on individualised care:

'...physiotherapists had quite a go at me ...lift my leg do this do the next thing and I had to try to say to them well I couldn't' do this before I broke my hip... how do you expect me to do it now...they just [pause] ignored that...of course you can...everybody can...I was thinking well I'm not everybody...they didn't ...really treat you as individuals it was [pause] one box fits all...' (GT)

Almost all participants recounted having been told by community or hospital healthcare staff that they were too young for this injury. The example below of a GPs response to a 45 year old participant who sought advice having fallen whilst ice-skating over two weeks earlier was common: *'... "a fit young man like yourself doesn't go round breaking your hip"...'* (ST)

In addition, participants recounted others' preconceived ideas regarding the cause of the injury which was often assumed to be the result of high energy activity such as motorcycle or horse-riding. One participant described the hospital discharge summary he received as recording the cause of injury as a motorcycle rather than a bicycle injury despite his clear identification of the cause. It appears therefore that assumptions made by healthcare professionals had overridden what the patient had communicated. This is consistent with other participants' descriptions of not being listened to when they tried to communicate unexpectedly severe pain or mobility issues. These issues may be related to others' assumptions regarding the presumed low risk of the activities involved resulting in serious injury as this participant recounts:

'...they couldn't understand how I'd managed to break it like I did...bear in mind I was only 54 and there was a lot of people in their 70s and 80s...' (PS)

and norms regarding recovery such as how pain or limited mobility are experienced. Staff assumptions and communication with participants based on these also included the following experience of a 40 year old participant who was paraplegic prior to the fall:

'...the surgeon said "we'll have you up and running about really quickly" I said that's impressive...and he said what...I said I've not walked for 8 years...I had to say I use a wheelchair...which was awkward...' (AVS)

This was not a positive experience for the participant. Whilst this staff member no doubt intended to be supportive and encouraging, this could be an understandable error within the context of a complex surgical environment. Perhaps more worryingly, this participant also stated that supportive communication with staff was not a common feature of her wider healthcare experience as a disabled person. This meant that what she considered to be a crucial support mechanism was often not available to her.

Staff awareness of the wider concerns they had was important to participants. As most worked full time and had other responsibilities they were often worried about other issues. For example, one individual was dealing with two major work projects, a house sale and other practicalities following the recent death of two relatives when she fell, without any family or partner for support. She therefore worried what impact the injury, her need for surgery and an extended period of recovery would have on her broader life. Staff who recognised such wider concerns were described by participants as more supportive. Examples of high quality listening that resulted in staff in a range of settings empowering participants were also apparent in the narratives. For example, an occupational health nurse enabled one individual to feel comfortable about challenging the inconsistent and inadequate care she received. This also prevented self-doubt that her expectations of care were too high. Participants also shared examples of the empowering effect of physiotherapists who positively motivated and challenged them, spurring them on to greater recovery. This was in addition to other staff who offered support in pursuing litigation and compensation where this was appropriate. However, participants also described being talked over by staff as if

they were invisible whilst individuals also appeared to remain deliberately silent at times based on a perception of staff as disinterested:

‘...they don’t always want to know because I’m not really a major case you know.’ (FMc)

Whilst the source of this participant’s perception was not further explained or explored in the narrative it may represent an example of individuals silencing themselves.

A lack of shared understanding appeared to be at the heart of many of the less positive care experiences participants described concerning communication. For example some individuals assumed that because they had not been told their bone density was low, it must be normal when this was not necessarily the case. Similarly, whilst one participant reported knowing she may be more at risk of fracture she did not anticipate the risk of hip fracture. In addition to misunderstandings about their own condition, unfamiliarity with care processes also had an impact on participants. This is illustrated by the following comment concerning one individual’s use of common self-administered pain relief:

‘...I had a clicker thing...he says well you’ve not used that all night I said well nobody explained to...otherwise I would have done...’ (PW)

A lack of previous experience and misinterpretation of the information she was given, also meant another participant only discovered months later that she had inadvertently discharged herself:

'...I had managed the stairs...said does that mean I can go home now and they [physios] said...there's no reason why you shouldn't...so I took that to mean yes... didn't realise that was...self-discharging...I'd not been in hospital since 18...don't know what the process is...nobody explained...there was nothing...I could read...so...I came home...didn't know I had to be discharged by a doctor...I assumed...if I was able to do what I was supposed to...do...and clearly they were desperate for beds...' (SF).

The misunderstanding above may be related to the general keenness of participants to leave hospital that will be discussed in the next theme. It also illustrates however the ease with which miscommunication can inhibit a shared understanding between staff and patients, and ultimately the experience of care. Two *Collective Voices* reviewers specifically commented on the individual nature of the recovery experience and a Junior Doctor related the quality of patient experience to the frequency with which patients are seen and communicated with by the team. It was unclear from the comment however, whether the team referred to was the medical or wider multidisciplinary team.

4.4.2 Theme 2: Experience of Care

Participants' stories all focused in detail on their experience of care, often beginning with the circumstances in which they fell and using the phases of the

patient journey as a guide. The findings in this second theme are therefore presented in three sub-themes which reflect this. *Pre-hospital care* explores the response participants and others had to the injury and the impact this had on their route to hospital. *In-hospital care* discusses participants' experiences of A&E and in-patient care. The mode of arrival, ward environment, effects of surgery, physiotherapy and discharge experiences are key features of this sub-theme. This section concludes with the third sub-theme, *Post-discharge care*. This focuses on the environment in which participants recovered after leaving hospital, their management of limited mobility and experiences of follow up care.

4.4.2.1 Pre-hospital care

The findings in this sub-theme related to two areas: the initial responses of participants and others they came into contact with in the early period after the fall; and the nature of their route to hospital. Whilst some individuals were incapacitated by the fall and received urgent medical care, others were not. They responded very differently to the injury which often resulted in delayed help-seeking, delayed diagnosis and a less conventional route to treatment.

Perhaps not surprisingly given the minor nature of the falls, members of the general public and community services staff were frequently identified as giving initial aid immediately after the accident. These included a bus driver, an off-duty nurse and a local GP as well as paramedic and ambulance staff. At times their actions simply involved calling help although on one occasion a participant's relative and then a local GP had to negotiate with ambulance control staff who

suggested the individual could transport himself to hospital. There were however, also examples of very supportive ambulance crews. These included organising local storage of a participant's bicycle and, delivering home, whilst en route to A&E, the dog another individual had been walking when she fell. Family members also frequently featured in this aspect of the participants' stories, often in providing transport to hospital. In these cases the journey to hospital commonly involved more than one source of help and/or transportation:

'...daughter drove me... fifteen miles... comfy enough...got home...n couldn't get out of the car... my ex...was at home when I got there...rang the ambulance from the pavement...' (GB)

The timing and mode by which participants arrived at A&E varied. Not surprisingly given the severity of the injury, it involved paramedic/ambulance transfer immediately after the accident for some. One individual was airlifted to hospital having slipped on a muddy path whilst visiting a remote location. She, along with others who were equidistant from local hospitals, negotiated being taken to the one nearest home. Often participants described a very quick response:

'...the paramedic was that quick...the chap walked to his van...phoned 999...and by the time he walked back you could hear the siren...car pulled up on the pavement and he was there...' (MS)

whereas others experienced a delay. This included one participant for whom ambulance control was unable to give an estimated time of arrival despite repeated enquiries and another who was still waiting over 90 minutes after dialling

999, lying on the ground in freezing conditions and unable to move. In these cases, individuals were eventually transported to hospital by friends or passers-by.

In contrast, there were a number of participants who did not go directly to hospital after the fall. Instead these people went home, for example: driving approximately five miles; running a further four miles; or cycling a further 5-10 minutes. These individuals were either not in severe pain and therefore unaware the injury was serious, or had realised they were in a vulnerable position with little means of summoning help and needed to get to a safer location quickly. One such example was a participant who fell at night, on a secluded river path, in freezing conditions and with no mobile telephone. Another individual described deliberately avoiding A&E attendance:

'...I didn't really fancy going to A&E...on a Friday night if I can avoid it... thought I'd have a hot bath...a little bit to eat... went to bed and had a very bad night's sleep...' (PBW)

Realising next morning he needed medical help he subsequently sought a lift to hospital from his mother. He described the extreme difficulty getting his injured six foot five frame into her small sports car before finally managing to “stagger” into A&E. A further participant having seen her GP, then driven to A&E, subsequently discharged herself, because of concern for her young son. Having driven home to collect him from school and organise his care, she returned later that day for admission and surgery. More extreme examples of participant delays in seeking medical assistance include one individual who continued to work for approximately

two weeks post injury, only visiting his GP because the pain had not diminished. The GP diagnosed soft tissue injury and when this did not improve eventually referred him for physiotherapy. The fracture was subsequently discovered approximately five weeks post injury following a 'just in case' x-ray ordered by the physiotherapist. Such examples of delay seeking help were not uncommon. Thus, many participants did not present at A&E immediately, and even when they did, often walked or limped into the department independently rather than arriving by emergency ambulance as would usually be the case for hip fracture patients.

Others' responses to participants' presentation post injury were a key part of all the stories. In addition to not expecting a hip fracture in people of their age following minor trauma, it appears participants' relatively calm demeanour and ability to cope with severe pain also affected how others responded to them. This included friends, who thought they were joking and scepticism about the severity of the injury from first responders. These included members of the public, healthcare staff, hospital reception and medical staff. Participant narratives describing being ignored by staff were not uncommon. For example, having initially been ignored by supermarket staff until she convinced them she could not get up, this individual describes the subsequent paramedic response:

'...obviously thought oh she can't possibly have fractured her hip...because I was too young and... because I wasn't making a hoo ha about it...soon as they got me on the stretcher...one of them said quite quietly to the other... [pause] oh my God [pause] we think she has...but up till then...they were sceptical and the [shop] staff just didn't believe me.' (SJP)

Thus, although all participants eventually accessed hospital treatment, the means by which they presented varied. Some did arrive via emergency ambulance, many others, however, as in the examples above, transported themselves or got a lift to hospital. Thus their unusual response to the initial injury and delay in seeking medical assistance resulted in delayed diagnosis for a number of participants. It is not surprising therefore that many individuals described being told: ‘...*you don’t present like a fractured hip...*’ (SJP) although for some participants this was not surprising:

‘...I don’t fit the classic demographic for that kind of injury...so it might not be the first port of call for diagnosis... people that are under 50...’
(GA)

It therefore appears that the unconventional nature of how many of the individuals in the study presented post injury appeared to influence not only their own responses to the injury but also those of the people they came into contact with as a result.

4.4.2.2 In-hospital care

The findings in this sub-theme comprise two main sections. Firstly, the experiences of participants upon arrival in A&E and the early treatment phase. The second section addresses participants’ experiences of ward based care.

4.4.2.2.1 Arrival in A&E and initial assessment

The mode of arrival at A&E appeared to have affected participants' experience of care. These included two main groups: those arriving by emergency ambulance and those brought by relatives or friends or driving themselves. Individuals arriving by ambulance focused on being met by a trauma team and the practicalities of transfer from first responder to A&E care. There was much praise for healthcare staff overall with comments such as: '*...absolutely brilliant...*'(JD); '*amazing*'(PS); '*...absolutely marvellous.*' (VJ); '*...the staff were excellent...*'(FMc); '*...absolutely fantastic...*'(GT); '*superb...I can't praise the staff enough.*' (PW); '*...first class...*'(PBW) and '*...nothing was ever too much trouble.*'(SF). However participants also described much less positive experiences such as:

'I wouldn't say it was as bad as looking at you as like you were a piece of meat but it wasn't far off.' (SF)

Pain relief was a common focus and this participant describes variability in the effectiveness of his pain control following arrival at A&E:

'...it's very different...the ambulance driver gave me the mouthpiece I'd been using [for inhaled pain relief]...but...once you're in hospital there's no sense you're getting any more...it was kind of no [pause] now you've just gotta grit your teeth...the contrast between the two...' (JP)

Whilst there may be a legitimate reason for this difference, the patient was clearly not aware of it. Many participants described feeling none or very little pain whilst stationary. Pain on being moved however, was commonly described as much

worse, or '*horrendous*' (DM) as this participant put it. A small number of individuals presented with little or no pain which appeared to confuse staff regarding the seriousness of their injury. This left one participant wondering whether to pretend to feel worse to justify being met on arrival by a full trauma team. Another resulted in a very upsetting episode regarding pain relief that culminated in a nurse reporting a colleague's aggressive attitude toward the participant. The incident appeared to originate from a doctor's misinterpretation of the severity of her pain as she was not exhibiting the physical cues expected. These individuals were often described as having a particularly high pain threshold either by themselves or others.

Participants were mostly very complimentary about the quality of care in A&E as this example illustrates:

'...A&E was fantastic...moved me... no problems... talked to me about what they were doing...allowed me to do as much as I could for myself...gave help where I couldn't do things...really really good...' (SF)

Positive experiences however were not universal. One of the few examples of poor care in A&E involved unnecessary pain caused during transfer as this participant recalls:

*LS: one of the worst things they was...they rolled me right onto my hip
[laughs]*

GJ: ...the hip you'd broken?

LS: that stands out as one of the things I didn't like [laughs]

and another only later discovered the difficulty her daughter had had getting initial help from a receptionist having driven her to A&E:

‘...When my daughter asked for a wheelchair...she just asked well how did I get here...could I not walk in?...luckily there was two ambulance men there who brought me a wheelchair and got me in...’ (HEW)

Participants who arrived in A&E by other means had often driven themselves, parked in the main hospital car park and hobbled in. They commonly described waiting up to two hours to be seen in A&E, only to experience being immediately taken off their feet upon leaving the x-ray cubicle and: *‘...whisked straight into ...resus...’* (ST). This was despite having hobbled there from A&E after initial assessment and often compounded the shock they experienced. Once assessed however, many participants described diagnosis as quick and straightforward. Nevertheless, one participant noticed staff:

‘...all scratching their heads...suddenly wondering how old you are...can’t tell you anything yet...we’ve got to do another x-ray...gotta x-ray my hip...’ (JP)

as they sought a diagnosis. Others described unfounded staff assumptions regarding the likely causes of the fracture such as alcoholism and steroid induced osteoporosis:

‘...one of them looked at me and said have you always had a problem with falling Mrs [name removed]. I think they actually thought I was...an alcoholic...’ (SJP)

The experiences participants described appeared to be related to staff expectations and commonly accepted norms regarding hip fracture. These included not expecting this injury, at this age or following a minor fall and the relative absence of visible pain. These findings were verified during the *Collective Voices* review in which two healthcare staff noted that young/low impact hip fracture patients would elicit specific responses: ‘...*make alarm bells ring to look at pathological nature of fracture*’ (Junior Doctor 1) and ‘*it would certainly raise an eyebrow to see a young neck of femur fracture*’ (Radiographer).

Participants often described being operated on very quickly, sometimes before relatives had arrived at the hospital due to concerns about possible complications. Many others however described delays of a few hours to a few days, normally due to other emergency operations taking precedence. *Collective Voices* reviewers commented on the appropriateness of the current care pathway approach as a means of effectively managing the wide range of individuals and injuries presenting for treatment and highlighted the potential flaws in this approach. One noted that the current hip fracture pathway is: ‘...*not perhaps the best pathway for younger hip fracture patients...*’ (Staff Nurse, Orthopaedics). Although this nurse did not clarify her reasoning, the A&E nurse corroborated this view by identifying a: ‘...*lack of clear pathways for younger patients.*’ The same reviewer also noted a: ‘...*lack of understanding from junior medics...*’ which may have contributed to some of the poor experiences participants recounted.

4.4.2.2.2 Ward experience

Participants almost exclusively described an unproblematic transit through A&E and onto the ward even when there were delays waiting for a bed. Spinal anaesthesia, the preferred option for this patient group, left some with experiences of the operation itself:

‘...bizarre... you can feel your legs being moved around but you can’t exactly see what’s happening [laughs]...obviously you hear [pause] not very pleasant the drilling and [laughs] everything else while they’re putting the metalwork in ...’ (LS)

and others who tried to watch their operation whilst under sedation. This was uneventful with one exception:

‘...felt my right leg exposed and...sat there starting to think [pause] oh this should be quite interesting [laughs]...felt this slop slop slop of...really really cold liquid on my right leg...I said ooh that’s really cold [laughs]... should I be feeling that... next thing I remember was coming round in the recovery room...’ (JP)

A number of individuals described experiencing complications in the early post-operative period which are commonly associated with spinal anaesthesia. These included urinary retention and subsequent catheterisation, which was described as: *‘...horrific...the most unpleasant part...’* (PW) and low blood pressure which in a number of cases caused difficulties with early post-operative mobilisation. However the most alarming experience seemed to be for the small number of

participants who woke postoperatively to unexpectedly numb legs, until they were told this was a normal, temporary effect of spinal anaesthesia.

Issues related to the environment of care formed a key part of many participant narratives. Lack of sleep due to other noisy, commonly elderly people with dementia, was very frequently described and contributed to participants' strong desire for early discharge. This was compounded by being threatened by a fellow patient for one individual:

'...she...got out of bed...picked the zimmer frame up...I won't say she was going to throw it at me but she got annoyed then security came... got the feeling that she'd heard I'd come in and rushed into theatre... had my operation and she'd been waiting there...' (DM)

Conversely, a healthcare professional participant adopted a different perspective:

'...it's quite scary... it would have freaked me out but I knew oh it's because she's dehydrated and...I wasn't...frightened of the people that I saw...' (JFS)

Being moved wards, particularly at night due to bed shortages, distressed some participants. One in particular complained her late night, poorly communicated transfer the day after surgery was:

'...ageist...just because I was one of the youngest on that ward...they knew I'd been up...at something like half past 4 in the morning...' (SF)

The lack of Wi-fi facilities to compensate for reduced mobility was particularly frustrating for one participant although he noted it was of no consequence to his elderly co-patients:

'...drove me up the wall...had my laptop...my kindle and everything...no wifi ...to the rest of them they didn't give a stuff...I was kicking off...they was like well what's wifi [laughs] doesn't matter don't worry about it...' (PW)

Feeling out of place as a result their young age, relative to others with this injury, was common and a source of comic irony for this participant:

'...everybody was 70 plus...I'm 40 odd...just seemed odd that everybody was so much older... oh...visitors...their granddaughters were coming to visit them (laugh), I've got my Mum coming (laugh) fantastic.' (PW)

Relative youth however, appeared to have more far-reaching impact on the care experience as this 33 year old individual describes a comment between two nurses about her which she overheard:

'...she's only had this injury and she's young...that's generally...the attitude of a lot of people [laughs] cos you're not over 60...they just think you should be up and out....like it's a broken wrist or something...expecting...immediate recovery type of thing...' (LS)

This finding was specifically verified during the *Collective Voices* review by a healthcare professional who highlighted a tendency for staff to expect young

fractured neck of femur patients to: *'...get up and go... and emotional needs are not addressed...'* (A&E Nurse).

Participant stories however also highlighted lack of awareness and staff assumptions regarding the social situation and informal support available to young patients. A third of participants had to make new living arrangements before discharge as they lived alone. This was necessary to enable them to cope at home for what was an extended period of weeks or months unable to fully weight-bear on the affected leg. One healthcare professional participant articulated the challenges she experienced in accessing commonly available home loan equipment as reverse ageism:

'...you hit a certain age and things get triggered....because obviously its more prevalent...you get targets...or pathways set up...that they then follow and...well you don't fit [pause] the pathway [laughs]...cos you've got a neck of femur [pathway] that's over 60 you're a neck of femur in your 30s...' (LS).

Collective Voices reviewers also specifically commented on this issue, noting that young adults with hip fracture were expected to recover and be up and about a lot quicker, with nurses perhaps expecting much more from this patient group.

Physical needs frequently featured in the participant stories. Again experiences varied markedly, often at different points of the recovery journey within the same narrative. Some participants spoke of receiving expert help, everything they

needed and good continuity of care, citing pre-admission, in hospital and post-discharge examples. Specific examples described in the narratives included: quick, painless transfer between trolley and bed; excellent technical surgery and individualised care determined by their specific needs.

Ward processes were also commented on by participants:

‘...reminds you of army days...a regimented [pause] time for certain things...you can...set your watch by it...’ (ST).

Whilst this participant saw regimentation as unproblematic and: *‘...just something you fall into...’ (ST)*, for others this lack of flexibility was a key factor in reducing the quality of their care experience. For example, a participant who was disabled before the fall strongly argued her recovery was hampered by her being prevented from using her wheelchair. This was because of staff inability to secure the appropriate hoist equipment to support transfer between bed and chair. She also described however the therapeutic nature of the hospital environment which she shared with other patients. This included helping to put her situation into perspective:

‘...I had one feel sorry for myself...I only came in with a broken leg and now I’m stuck here...then the poor lady next to me came in with a sore knee and was given six weeks to live so [pause]...put things in perspective...’ (AVS)

Physiotherapy was a key element of all the narratives. One participant who worked as a physiotherapist described using her professional knowledge to treat herself by instigating leg exercises immediately after waking from the anaesthetic. Most participants described receiving good physiotherapy whilst in hospital although a small number reported not remembering much being offered. Many participants described a stalwart approach to physiotherapy such as: *'...you've just got to grit your teeth and get on with it...'* (RP). This appears to have been related to participants' desire to get back to their previous lifestyle and avoid further surgery. As a result the importance of following the physiotherapist's instructions was often highlighted in the stories as illustrated by this example:

'...I did everything I was asked to do...because it was so important...it was explained to me that if the hip did not repair itself...I would have to have a false hip...' (MES)

Associated with this positive mind-set, which is discussed in more detail in the *Identity* subtheme in Theme 3, one participant specifically described aiming to be as independent as possible whilst in hospital so as not to trouble staff.

Participants all described the duration of their stay in hospital, comparing multiple admissions such as when further surgery was required where relevant. Duration of hospital stay varied, ranging from just over 24 hours to more than three months. A small number of individuals were in hospital for two to three weeks or longer but most described a stay of between three and seven days. All participants were keen to leave hospital as soon as possible and reported being very clear about

what tasks they needed to perform before discharge. This included negotiating stairs on crutches. This finding was specifically verified during the *Collective Voices* review by healthcare staff who reported that young adults with hip fracture were very focused on what they needed to do to get physical function back and return home.

The fall resulted in a period of immobility for all participants followed by an often extended period of reduced physical capacity and mobility and varying degrees of dependency during this time. This was a major change for these individuals who had almost exclusively been totally independent and very active before the fall. Therefore staff who enabled them to maintain a sense of control, by being as independent as possible whilst also providing help when needed, were valued by participants. Preserving dignity was an important part of this. Participant experiences however varied widely in this regard, ranging from very positive, to unacceptable:

'...doctors just walk in even though the drapes say...don't come in...they just walk in [pause] and there you are half dressed [pause] nice to see you.' (AVS)

This participant perceived the drapes 'incident' as invasive and disrespectful. It also increased her sense of frustration at being unnecessarily disabled by the hospital environment following her injury and the forced dependence this created. She identified the cause of this as a lack of support for wheelchair users, although she often used humour as a means of coping:

‘...it's a hospital it should have this stuff...one or two people might have mobility impairments here...just a hunch...(laughs)’ (AVS)

The overall perception of the care experience was varied. Staff were frequently cited as important determinants of this with many participants identifying members of a range of staff groups. When describing a positive care experience the factors participants discussed included: staff who were ‘...attentive...’ (JD, PBW) and ‘...approachable...’ (FMc). They also recounted being ‘...well looked after...’ (JD), experiencing a range of examples of individualised care, and ‘...no pain...’ (FMc). These positive in-patient experiences were only part of the picture and a range of examples of what participants described as poor care were also identified. These included ineffective pain control:

‘.....really good overnight...shift'd changed... took them an hour and twenty minutes to even come down to my room [pause]...I was in absolute agony and in tears [laughs]... it was two people needed for the key...that took about another twenty minutes [laughs]...’ (LS)

In addition, staff with a task rather than person-centred focus, poor attitude and not enough time to care also featured in participant narratives. As this individual describes:

‘...I found hospital quite horrendous...you weren't nursed you were processed...was the worst time of my life...after ten days I thought I'm out of here...just could not stand...the...lack of care really...lack of humanity...’ (RP)

A perceived lack of time by staff was a key feature of participant stories that was associated with the quality of support provided. In some narratives this was justified and understood by participants who had a lot of empathy for staff, recognising: '*...their workload was horrendous.*' (SF). In others however it was associated more with a task instead of person centred attitude than lack of time, as this experience of physiotherapy illustrates:

'...she just didn't want to do her job...she was rabbiting on about the latest thing she was doing...chatting to her friends over the opposite side...it was rubbish...' (VJ)

It is possible that had this member of staff included the participant in the conversation she may have had a very different, more positive perception of this care event.

Apparent lack of staff understanding regarding the practical difficulties created by the injury contributed to a poor care experience for participants as this example illustrates:

'...there's no joined up writing...don't seem to talk to each other properly...they moved me...probably the furthest possible point for a toilet you could be and...told you can only put 20% of your weight through this limb...yet I've got a mammoth trek to go to the loo...just...lack of planning...understanding...consideration ...' (GT).

Collective Voices reviewers verified both the good and poor care described, reflecting the variety of experiences recounted by participants. One specifically elaborated on negative outcomes:

'Many have poor ward care...this often makes them reluctant to attend hospital again, particularly for another orthopaedic event...' (Paramedic 2).

Having described a number of examples of poor care from her post-operative experience, one participant recounted her desperation:

'I just thought this is...not good for my mental health I'm...never going to recover in this situation...' (SF).

Although two *Collective Voices* reviewers refuted a participant's description of her hospital care as '*...appalling...*' (SF) this was on the basis that they would: '*...try to help them at the time...*' (Nurse Practitioner). The sentiment of these reviewers was borne out in the narratives in which some participants recounted examples of staff advocating for or supporting them in challenging or responding to poor care from others. At both ends of this spectrum, participants specifically highlighted one or two individuals that either significantly positively or negatively affected their recovery experience. This included support services as well as clinical staff. It therefore underlines the importance of the contribution that each staff member and each interaction, however brief, had on the overall participant experience and perception of care.

Individuals frequently used graphic language when describing their desire for discharge home, for example:

‘... I did escape after ten days...would've signed anything to get myself out of there...(laughs)...it's Starlag... really motivated me to try and up my fitness...there was no way I wanted to stay...’(RP)

A positive, proactive approach to recovery and their keenness to leave hospital as quickly as possible were clearly verified by the healthcare staff *Collective Voices* review. They highlighted this young patient group's focus on function: *‘...what they need to do and how this affects them’* (Junior Doctor 2) which may have contributed to reviewers indicating that most patients: *‘...talk about private physio or alternative treatments’* (Staff Nurse, Orthopaedics). This apparently proactive approach to self-care may rather be a practical response to the: *‘...very definite lack of follow up for younger patients...’* identified by the A&E Nurse who related this to the need for: *‘...specific goals to be identified at the outset and monitored’*.

Discharge from hospital was not always straightforward. Two participants' discharges were delayed as they had been injured and admitted a long way from home and required specialist long distance transport. Others described the frustration of waiting all day for ambulance transport, including one person who was not allowed to organise his own:

‘...had to wait...six and a half hours for my meds and...the transport...says I don't need transport I'll get a cab...but they wouldn't have it they said...you've got to go in official transportation...’ (PW)

A further two participants discharged themselves. One of these was not even aware she was doing this at the time, and the other was frustrated at the inability of the hospital to accommodate the needs of her pre-fracture disability:

‘...just didn’t want to stay there any longer...had to sign disclaimers...I was medically cleared 4 days...before actually getting out...there was no flexibility in the system to accommodate somebody who presents as slightly different...’ (AVS)

Discharge preparation and wheelchair supply were also specifically identified as problematic by a healthcare professional *Collective Voices* reviewer: ‘...takes forever...’ (Junior Doctor). Some participants experienced good provision of home loan equipment to support their limited mobility needs on discharge or coped well using their own adaptations. This was not the case for many unfortunately, which this individual associated with her relative youth:

‘...you had to ask for a lot of stuff...whereas [pause]...when you hit a certain age things get triggered...I know I’m going to my parents but I don’t wanna be there too long [pause] and...once you’re out it’s very hard...to then...get reassessed...(laughs)...possibly because of my background knowing...a little bit about how the health system works (laughs)...somebody else would just have gone great I’ve got crutches and got home and then struggled (laughs)...’ (LS)

This participant was unusual in that as a physiotherapist she had specific knowledge of the healthcare system and appeared to successfully use this to support her own care. Her experience of having to ask for help was not unusual. Other participants without this specialist knowledge relied on past experience of

family or friends with a similar injury to support their recovery as discussed in Theme 1.

4.4.2.3 Post-discharge care

The findings in this sub-theme fall into two main areas. These relate to the environment and support for recovery and experiences of follow up care after discharge from hospital.

4.4.2.3.1 Recovery environment and support

Most participants experienced a relatively short hospital stay and the majority of their recovery in the community although all had limited mobility. This ranged from six weeks to eight months but for most individuals was between six and twelve weeks. Restricted weight-bearing therefore became the main factor determining how and where participants recuperated after leaving hospital and meant supportive equipment was required. Access to home loan equipment however was variable both in terms of availability and the range of equipment provided. A small number of participants experienced effective provision organised pre-discharge. This was not common however and in some cases was only provided after a second fall or complaint from the relevant surgeon.

Apart from crutches, almost all participants described having to ask for supportive equipment or source it themselves. This included borrowing basic items from elderly relatives, friends or the Red Cross. Others secured informal, short term

loans using personal connections in the NHS. Faced with an extended period of approximately eight months non-weight bearing, one participant eventually purchased her own wheelchair at significant cost having concluded this was the only option available to her. A number of participants described barriers to accessing equipment post discharge rather than supportive care. One described being ‘...*fobbed off*...’ (RP) when told that because she had been discharged she would need to organise her own Social Services referral.

Another participant recounted that her younger age and good pre-injury fitness level had led to staff assumptions regarding the help she needed:

‘...things weren’t perhaps considered in the same way...oh you won’t need it...or you won’t need it for long so we won’t lend it you...these are like little things that [pause] sort of barriers [laughs]...’ (LS)

The challenges of life on crutches or in a wheelchair for an extended period formed a large part of many participant stories. Individuals living alone and others with unsuitable accommodation could not return home. As this participant notes, individuals often experienced staff overestimating the post discharge support available to young adults:

‘...I was explaining well you know I live on my own...there’s just a presumption that...you’re gonna have somebody at home that can care for you...and it’s not...’ (LS)

This participant's experience may not be surprising as a nurse, *Collective Voices* reviewer appeared to assume that young patients had large support networks and plenty of help post discharge because she observed them surrounded by visitors in hospital. The issue raised by the participant comment above was also specifically highlighted by a Junior Doctor during the *Collective Voices* review:

'I have found support for younger patients less than that of older ones, simply because they and their families have busy lives. Older patients seem to have friends and family who have more time also they seem to be better settled into an area.'

Thus, this finding was verified by these two healthcare staff reviewers although for very different reasons. As a result participants often moved back in with parents, purchased a property to suit their mobility needs, or moved into a more suitable property recently vacated by a deceased relative:

'...was pretty horrendous...I'd not lived in this bungalow before [pause] didn't particularly know about where...and I couldn't move...it was awful really really awful...although my parents had lived there...I wasn't particularly friendly with the people so I was very isolated...' (VJJ)

Isolation was experienced in different ways and even those living with parents, spent extended periods of time living in one upstairs room unable to negotiate stairs and relatively isolated. Many felt physically unprepared for the home environment:

‘...the hospital environment...everything’s been designed with that in mind there’s no...door sills...to get over...all the steps are uniform...even getting into the front of our house...managing the front door...I wasn’t really ready for any of that...was quite an emotional challenge...’ (JP)

Participants found narrower, steeper stairs with only one handrail very different to hospital. They therefore avoided using the stairs wherever possible or went up and down seated on the floor because it felt safer. This created other difficulties however such as becoming stranded on the floor, unable to get up until help arrived. Some participants reported another fall soon after discharge requiring hospital attention although none had caused further hip injury. In contrast a small number of participants described no such difficulties having made their own often creative adaptations, to enable everyday activities. Nonetheless these same individuals described similar difficulties as others with maintaining personal hygiene because of inability to manage a shower or bath independently.

Participants generally preferred to recuperate at home however, often making use of non-healthcare facilities to help them manage everyday practicalities when they had limited alternative support:

‘...I did shopping online...and the guys from Tesco were brill...they used to bring it in and put it all away for me.’ (SF)

Securing timely access to physiotherapy, which was recognised by participants and *Collective Voices* reviewers alike as crucial for recovery, was a key focus in all

the narratives. Despite this, it was not uncommon for participants to describe being offered no physiotherapy at all and not all individuals received physiotherapy in hospital and post discharge. Of those who did receive physiotherapy, this participant's approach was typical: *'...she gave me exercises to do...I did them religiously every single day...'* (PAS) although they often reported how painful the exercises were and how difficult it was to remain motivated, particularly in the long term. One physiotherapist participant focused particularly on the type of physiotherapy she received:

'...it was mainly exercise based [pause]...that's what a lot of it is but I felt that was the one thing I knew what to do myself...it was the hands on stuff I couldn't do...a colleague of mine...released it off...then I could exercise a lot more easily...' (LS)

Another participant's employer organised and paid for physiotherapy after he was denied it by his doctor. For others, their GP provided referral although this created inevitable delays of up to four months post discharge. Thus many participants described organising their own private physiotherapy or supplementing this with other activities to support recovery. These included swimming, gym, cycling and dancing. Overall, a general picture of physiotherapy rationing emerged although in a small number of cases, individual physiotherapists were able to access additional sessions. One participant, herself a practising physiotherapist, actively trying to recover strength and mobility to expedite return to work, worried for other hip fracture patients with fewer personal resources or healthcare knowledge about how to access services for themselves. This was based on the experience of her

own manager discharging her from physiotherapy without notice or notification.

When she questioned this she was told:

‘...you’ve had lots of sessions...maybe you just need to get used to living with chronic pain.’ (LS)

Participants with this type of experience felt such attitudes were not supportive of recovery nor were they consistent with the information they had received from medical staff regarding their expected recovery of near normal pre-injury functionality. Limited access to physiotherapy was also specifically verified by one of the carer *Collective Voices* reviewers.

Dispensing with crutches was a key part of the stories and often the point at which participants requested physiotherapy:

‘...when I went after...3 months...he said to come off the crutches...I said I can’t walk [pause] I can’t do my job [pause] the way I am... I did ask him about physiotherapy...he just dismissed it...said you’re a [pause] motivated man you won’t need it...’ I understand it’s all the cutbacks [pause but]...there wasn’t no plan...you just go do it kind of thing...’ (MS)

The psychological impact of walking independently again without crutches was commonly described as: *‘...daunting...learning to walk again...’* (PS) or *‘...like a toddler...’* (RB). The exceptions were participants who gradually increased their weight-bearing by listening to their own body rather than following medical advice:

‘...I was maybe a week ahead of what he’d allowed...I...formed the view...I’m young maybe I’m healing a bit better...the things I was being allowed to make was aimed at...Mr Average...I could perhaps try to recover a little bit quicker...’ (PST)

Individuals recovered at different speeds. A small number reported being back to normal for most activities within three months and one had not really thought about it after a couple of months. The various reasons individuals gave for quick recovery included good pre-injury fitness and walking a dog, which encouraged exercise post-operatively although this was managed by walking from one local bus stop to the next with rests in between. Others however reported longer recovery times of eight to 18 months. Still others did not consider themselves recovered a number of years post injury as a result of ongoing surgery, residual symptoms or because they anticipated further recovery. These individuals were still pursuing personal recovery goals such as a return to dancing five or more years post injury.

4.4.2.3.2 Follow up care

This featured heavily in almost all of the participant narratives and often focused on bone density assessment. Nonetheless participant access to this was variable and a small number of individuals were initially refused because they were considered too young. As this 33 year old participant recalls:

‘...if you’re below sort of 65, 60...they...don’t consider it...unless you’ve done both wrist and a hip...it’s certainly not on the orthopaedic...surgeon’s radar or wasn’t 5 years ago anyway...’ (LS)

She was subsequently referred by her GP and described her frustration regarding her experience of this as follows:

'...had to go to the care of the elderly rehab day hospital...to see this... geriatrician...with an interest in bone metabolism...all the screening questions... was like for the elderly...it struck me...they were following a pathway...asking questions whether they were relevant or not...' (LS)

This is consistent with a previous finding regarding the inappropriateness of the current hip fracture pathway of care for young adults with this injury. Furthermore, this participant perceived a gap in knowledge regarding the treatment of pre-menopausal women with low bone density but no identifiable cause.

'...did loads of tests...they didn't know why...decided not to treat... there's a gap [laughs] [pause] in...pre-menopausal...they just don't know what to do with you...we'll re-scan you [pause]...after pregnancy or after your menopause...then if it's low...we can start actively treating you...you're a bit younger you don't quite fit the criteria...we'll wait until after your menopause...by then...you might already be osteoporotic and then we'll worry about it...' (LS).

She clearly articulates here what she perceived to be some of the disadvantages of care pathway directed care which resulted in a gap for young individuals in this situation and left her feeling unsupported. In contrast, access to bone health assessment was triggered by the hip fracture for others, often specifically because of their relative youth. However, individuals subsequently found to have normal bone density often described experiencing surprise from healthcare staff who expected an abnormal result given the seriousness of the fracture following a

minor fall. The exception to this was one person who was cared for by medical staff with experience of similar injuries in young military personnel exposed to severe physical training conditions.

Follow up was variable and some participants expected follow up scans that did not materialise. Small numbers of participants reported no medical follow up but this was uncommon and individuals were generally reviewed as outpatients for one to five years post injury. A small number of participants described additional tests such as MRI, CT scanning or frequent x-rays to determine healing of the fracture where non-union was suspected.

Some participants described undergoing further surgery for complications having waited between one and eight months from referral. One participant reported: '*...not bothering...*' (RP) with the offer of a one year follow up appointment.

Although her reasoning was not clear she had previously described a lack of support from healthcare services post discharge. A small number of participants reported being given an indefinite, open hospital appointment. One individual was unclear whether or not she had been discharged from follow up and who to clarify this with. A number of participants described a lack of follow up, particularly in the first few weeks post discharge, which may have precipitated this response. They variously described this as being left to their own devices:

'...the orthopaedic surgeons patch you up from their point of view it's a good x-ray it's stable your hip moved well bye bye their work is done (laughs)' (LS)

or feeling abandoned in a perceived gap between healthcare systems:

'...you're on your own...no support really...you have to sort issues...two different systems...once you're discharged from hospital they've done with ya... you're...in no man's land...nobody's [pause] got responsibility for ya apart from yourself...' (RP)

As a result, participants tended to refer themselves or seek re-referral for new symptoms. These included new, severe pain and bone density follow up. Some participants noted that not being able to determine a cause for the severity of their injury led them to conclude that not enough was known about the injury in this age group:

'.....you're functioning...but not as you used to be...you've got no idea what ...the average person with this injury does in our age group ...maybe it would help with...professional decisions as well...lots of times they don't...know either...' (LS).

Summary Theme 2: Experience of care

The findings in this theme provide a situated view of the care participants experienced following the initial fall, throughout recovery. The quality of the care experience ranged from excellent to very poor, often varying between participants and at different points in the same story. Routes to treatment were diverse and

although a single, short hospital stay was common, multiple admissions over many months were sometimes required. Access to physiotherapy and assistive equipment was commonly problematic and often sourced by participants themselves as a result. Securing reliable information and effective communication was also variable. This was often the result of higher staff expectations of young patients. In addition, staff assumptions and sometimes participants' limited knowledge of common care processes led to misunderstandings. Overall, the findings reflect some limitations of the current care pathway approach to care for young adults with fragility hip fracture whose age, mode of injury and clinical presentation did not match the public and professional norms commonly associated with this injury. A specific gap in the current knowledge regarding the optimal treatment of pre-menopausal hip fracture patients in particular was identified.

4.4.3 Theme 3: Impact on Self

The impact of the injury on participants was wide-ranging and enduring and emerged in three main areas, namely: *Emotional impact, Work and finances and Identity*. A range of emotions such as shock and fear were precipitated by the injury therefore the first sub-theme explores their impact. Issues such as the impact of extended sick leave, the challenges of returning to work and the long term implications of the injury are addressed in the second subtheme: *Work and finances*. This section concludes with an exploration of the identity issues that participants raised. These included pre and post-accident concepts of self that

participants recounted as emerging following the accident which were both challenging and positive.

4.4.3.1 Emotional impact

The narratives were rich in participant descriptions of the emotional impact the injury had on them. These included: shock and making sense of the situation; guilt; relinquishing and regaining control; fear and seeking to reduce risk; avoidance and viewing the experience as an opportunity.

Shock featured in all the narratives. Words such as: *'trauma'*, *'traumatic experience'*, *'devastated'* or *'in shock'* were frequently used by individuals to describe the fall. As one participant stated:

'... too painful to remember...for quite a long time [pause] I couldn't really speak without...becoming really really emotional...maybe it's a blocking mechanism because it was so [pause] traumatic...' (DH).

Similarly others were unable to remember much about the injury event, particular aspects of it or the actual circumstances of the fall. This may be an emotional reaction. Conversely, the traumatic nature of the fall resulted in particularly vivid, detailed memories for others which as this participant describes were: *'...imprinted on my brain...'* (MES).

The sudden and unexpected nature of the fall contributed to the sense of shock, which one individual likened to the bereavement cycle. In particular, participants injured whilst cycling saw themselves as generally very fit and used to falling without serious injury: '*...I've always got up from every other fall...*' (JP). This, along with the irony of sustaining a serious injury at such a low speed or height of fall, seemed to intensify the sense of shock. Some participants described struggling to take in the information given by medical staff in A&E, whilst others recounted coming out of this shock phase and into a sense of realisation by the time they were in A&E. Receiving the diagnosis and learning that urgent surgery was required with the possibility of a hip replacement was often described as a shock:

'...they told me...you've broken your hip...and we're going to operate on you this evening...bit of a shock...' (PST)

This was compounded for many participants who had previously been told a fracture was unlikely. Receiving unexpected information later in the recovery journey also created a sense of shock for participants. For example, the discovery of multiple, previously undiagnosed chronic health conditions, was more alarming than the fracture itself for one previously fit individual. The shock associated with unexpected news varied, but often involved the need for further surgery. For example, one man was told on the day he expected to be discharged from follow up that initial surgery had been unsuccessful therefore further operations and an extended period of time in a wheelchair would be required. It was often the implications of limited mobility and associated loss of independence or inability to return to work that intensified the trauma. For example, simple limitations such as

not being able to make a drink and transport it to another room: '*...created a shock to the system...*' (PBW).

There was wide variation in the narratives regarding the emotional impact participants experienced upon realising the severity of the injury. Some individuals recognised the hip fracture and its implications immediately, often because of familiarity with the symptoms due to previous experience of emergency services work. Participants however more commonly recognised the injury was serious due to severe pain or inability to get up rather than any prior knowledge or experience of the injury. A further group of individuals assumed their injury was less serious:

'...thinking it was just perhaps torn ligaments...I didn't think for one minute that I'd done anything serious...' (HEW)

sometimes due to a lack of pain or high pain threshold as discussed in Theme 2. One healthcare professional participant convinced herself her leg was not broken because she could correct the classic deformity in it. She also feared the potential embarrassment, as a healthcare professional, of inappropriately attending A&E with a minor injury. The circumstances of the fall also contributed to some individuals failing to recognise the severity of the injury. For cyclists in particular this was often due to having fallen previously without significant injury. For others it was the minor nature of the fall. Even following diagnosis some participants reported not realising for some time that the relatively short recovery period of days or weeks they initially anticipated, would actually be between four and 24

months. This participant was still coming to terms with the effects of the injury nine years later:

'...didn't think it would affect me permanently...I still have this half-hearted hope that one day...things will be as they were...think I'm deluding myself a bit really but I don't want to lose that...' (VJJ)

although, others were well aware that sustaining a hip fracture at a young age had potential long term implications.

Making sense of the fall and severity of the injury arising from it were important to participants. Determining causative factors was key and individuals described physical factors such as momentarily taking their eye off the pavement or slipping on laminate flooring despite wearing low heels. Occasionally participants attributed the fall to more ethereal issues such as being out of balance following recent family bereavements:

'...my body wasn't in sync after my father died...then his friend who was...popping round to see me...suddenly had a heart attack and...I was left on my own...' (FMc)

Finally receiving a diagnosis, a number of weeks post injury was a relief for one participant as it ultimately explained and helped him make sense of his symptoms.

Some individuals saw the fall as just unlucky. This sense of resignation was clear in a number of the participant stories. Phrases such as: '*...life's not a rehearsal...*' (HEW) or '*...can't turn the clock back...*' (MS); and not worrying about things they could not change reflected the resigned attitude of many participants. This approach was also noted in one of the carer *Collective Voices* reviewer responses as typical of young hip fracture patients. Nevertheless, the stories indicated individuals had to learn to come to terms with the injury mentally as well as physically as this comment implies: '*...I don't dwell on it...water under the bridge now...*' (RP).

Some participants highlighted their perceptions of how their experiences were different to those of patients with planned hip replacement for chronic conditions such as arthritis. This individual articulates how these differences might result in a different experience psychologically:

'...made me think...I mean if I'd been in pain...like most people...that have a replacement hip...are... they are really really pleased that they've got it cos it's...a new lease of life...to me it was the other way round...I was perfectly alright and I'd got to have one...so...it was a bit strange...' (JD)

A number of participants noted the lack of a personal reference point to help them make sense of the situation as this was their first experience of being seriously injured. One individual noted that in his 20 years of cycling he had not come across anyone else with a similar injury. This lack of a 'benchmark' to guide them was noted by a number of individuals:

‘...you’ve no idea if what you’ve achieved is normal...you just don’t see other people with this injury [laughs]...because you’re getting on with your life and...why would you bump into somebody else [laughs]...that’s had the same injury...’ (LS).

Attempts to make sense of the injury also prompted another participant to challenge her own assumptions of isolated hip fracture as an injury of old age, wondering:

‘...am I the only person in the world that’s done this [pause] at my age?...do younger people...trip over [pause] and do something like this?’ (DH)

The difficulty participants described in making sense of the injury and impact this had on their confidence afterwards was also specifically highlighted by healthcare staff during the *Collective Voices* review: *‘...the more velocity behind the injury the easier it is for people to rationalise’* (Junior Doctor 1).

Humour was often used by participants to enable them to manage other emotions such as what one participant described as the horrific embarrassment of being catheterised, or anger after a subsequent fall. Such emotions were often multifaceted as in this example where a fear of falling again during the early post-operative phase was balanced with a desire to escape hospital that was fuelled by a sense of feeling out of place:

‘...you've got to do the stairs...which on crutches and in discomfort...is quite daunting... but then I thought well if it goes pear shaped and I fall down at least I'm in the right place (laugh)...it was like being on a geriatric ward everybody else was...80 plus...they were lovely people...but..its just awful...(laugh) I don't belong in this company (laugh)...I just needed to get the hell out of dodge really...it just...wasn't for me.’ (PW)

Another participant recalled being playfully advised by friends to commemorate the anniversary of her fall each year by staying indoors. Others made fun of themselves as this example illustrates: *‘I’m quite pragmatic you know I am where I am I can’t run away (laughs)...’ (PBW)*

A sense of guilt or needing to justify themselves regarding the cause of the fall featured in a number of the narratives. This included cyclists who described falling despite having taken particular care on a corner or kerb. For many female participants especially, their footwear at the time of the fall was a key focus. They were particularly keen to emphasise that this was not the cause: *‘...I’d only got little heels on...I hadn’t got big heels on...’ (DM)*. Other participants blamed themselves and their footwear despite falling in potentially hazardous conditions in a shop:

‘...I did wipe my feet on that mat [pause] and I was wearing....just a very small heel...just skidded...went slap bang dumpf and landed...I’ve always thought that was why...you wouldn’t get that in a pair of flat dog [walking] shoes...’ (SJP).

In addition to guilt associated with the cause of the accident, guilt about the impact of their injury on others was also featured in the stories. This ranged from one individual expressing self-hatred about his tendency to fracture easily and the worry this caused his mum,

‘...what I thought was gonna be a normal boring day...turned out to be...catastrophic... just...ruined it...’ (JH)

to another’s guilt about disrupting the Boxing Day lunch of passers-by who helped transport her to hospital after an emergency ambulance did not arrive. This was still at the forefront of her mind four years later.

A number of participants described issues of control after the fall and related this to their professional background. This included healthcare professionals reflecting on the experience of being: *‘...on the other side of the fence...’* (LS) and an airline pilot’s response to his fall:

‘...it’s...a realisation that [pause]... I’m in other people’s hands now...just gotta wait and see how this pans out...suddenly being a passenger in this situation and other people were in control and in charge...’ (JP)

Relinquishing control in the early period after the fall was a common reaction among participants except for one man who was determined to avoid having his new jeans cut off in A&E. Often participants were happy to render themselves into the care of staff with healthcare staff generally, anaesthetists or ambulance crews

cited in the narratives in this way. Despite this, even those who relinquished control initially sought to regain personal autonomy as soon as possible. This included a 32 year old participant and his family researching hip replacement services to source the best surgeon should this be necessary. Participants used information gleaned from the Internet and a range of healthcare staff to help them regain control by making their own decisions on aspects of their treatment. This included stopping medication due to side effects affecting quality of life even when criticised and belittled by medical staff as a result.

The determined approach that participants adopted to key aspects of recovery was a consistent feature of the narratives. These included securing early discharge from hospital, avoiding a hip replacement and regaining independence. It was not uncommon for participants to describe taking wider control of their own care having experienced poor support from staff. As this individual explains:

'...how are you supposed to have confidence...I have a lot of people come through my door at work...but hopefully I'm not quite so...[laughs] I don't come across as quite so incompetent really...I suddenly realised I needed to really understand myself' (SF).

They only achieved personal autonomy to varying degrees however. For example, despite having control over her personal care budget and an established care package in place one participant, disabled before the fall, was prevented from using those to support her in-hospital care. As a result, she used her story to

highlight the waste of resources this represented and the frustration she, her family and carers experienced as a result of this lack of control.

The injury and recovery was a very frightening experience for most participants. For some, fear emerged immediately after the fall upon realising the isolated location and their associated vulnerability. Others with the means of summoning help, suddenly realised they could not describe the location by name. For all but a very small number of participants however, the individual either got themselves to a place of safety or help was on hand which dispelled this initial fear.

Nevertheless, a number of participants described the injury and recovery as the most frightening experience of their lives. This is not surprising given the sudden, unexpected nature of the injury which led for many to their first experience of hospitalisation or surgery. Conversely, a small number of participants reported no fear of hospital admission and the early recovery phase. These individuals either had previous professional knowledge of emergency care:

‘...I was a traffic cop...n had dealings with...fatal accidents n serious accidents...n brought ambulances in before n...been to A&E on many occasions...because I was from that world...I wasn’t particularly concerned for myself...’ (PST)

or had experienced good information and the reassuring and confident nature of healthcare staff had successfully mitigated any concerns. Despite this, participants overall identified a wide range of concerns. Some, such as learning to walk again without crutches, as previously described in Theme 1 emerged relatively early in

the recovery process. Others were still present many years post injury. For example, a fear of falling, particularly in slippery conditions was still a feature of many patient narratives up to 10 years post injury. Some participants described doing everything they could to prevent a further fall and others that the fear of falling again was a phobia they struggled to control: *'...it not only leaves a scar on your hip it obviously leaves a psychological scar as well...'* (RP). The emotional impact of this was often far reaching:

'...for 2 years I became very very depressed...it has changed my life...I was quite an active person and now I have to think about everything...I have this fear of falling over...don't take risks anymore and that's sad'
(MES)

This person may be identifying a further reason for a lack of visibility of the longer term effects of hip fracture in this age group as she actively hid her fear from others. She also appeared to lack the language to communicate the psychological effect of the injury on her even five years later.

Most participants described being very confident in other aspects of their lives yet also recounted additional emotional impact such as travelling a significant distance out of their way to avoid returning to the accident site. Some participants described constantly concentrating on walking whilst others only became more cautious in bad weather, when walking in the dark, or on uneven or slippery surfaces. Although for some this improved with time, this response was often longstanding. For example it took one participant six years to gain enough confidence to go

swimming again. A lack of confidence and fear of falling again were specifically highlighted as common post injury sequelae by a number of the *Collective Voices* reviewers including a carer, paramedic and hospital staff.

Avoidance techniques which enabled participants to cope with the injury and its ongoing impact were a feature of the stories. These ranged from psychological strategies such as trying to ignore pain and keep going and putting concerns to the back of the mind, to actively avoiding seeking medical help for ongoing symptoms. This ranged from self-treating pain eight years post injury to avoid visiting a GP for fear of being told a hip replacement was necessary, to avoiding A&E following a subsequent accident. For one individual this meant a fracture was only identified years later when she had to attend A&E for another reason. This illustrates a further potential silence as participants were reluctant to visit A&E. The reasons participants gave for such reluctance included potential embarrassment if a fracture was not found and seeing more minor fractures e.g. toes as insignificant. Perhaps most importantly, as this participant recounts, a poor experience during her hip fracture recovery had a lasting effect which still prevented her accepting hospital care three years post injury:

'...I slipped on a wet floor at work....rang NHS Direct...reluctantly I went to A&E...they said...we want to bring you in overnight...I says I've been there before...it was absolutely horrendous...I'm not coming in again...really really had to struggle to get a taxi...home...there's no way I want to go in again if it can be avoided...I would try not to go to...hospital...'
(RP)

The small number of individuals who stated the experience had not led to ongoing worries of this nature also spoke of trying not to let such concerns rule their lives. This appears to indicate an underlying anxiety as even these individuals often gave examples of how they had stopped or adapted activities they associated with risk of further injury. These included ceasing horse riding, starting to wear a helmet when cycling, avoiding cycling in rain or undertaking activities alone and thinking twice about activities they had previously engaged in without concern, fearing another fall. Fear of falling again often led to what was described as: ‘...*zero confidence*...’ (FMc) and resulted in participants taking specific action to minimise this risk. This included avoiding certain situations or activities. Only undertaking ‘must do’ journeys, especially in icy conditions was another strategy although work and other commitments frequently meant staying indoors was not practical.

Many female participants, despite claiming a love of shoes, described changes in footwear to what were described as: ‘...*sensible...awful shoes really*...’ (SJP) with a good rubber sole, or shoe grippers (Wintertrax). Participants also described renewing footwear more frequently to ensure a secure footing and one described a test she applied to the soles of shoes before purchase to assure herself of safety. This focus on changes in footwear was a particular feature of the narratives of females in the group who had all fallen whilst undertaking common everyday activities rather than leisure activities such as cycling or running. Some of these women described their post injury: ‘...*car to bar*...’ (DH) shoes. These were described as ladies’ dress shoes, perhaps with a small heel, that they only wore to walk short, predictable distances i.e. from house to car and into a venue in order to minimise the risk of falling again.

Conversely, a number of participants viewed the injury as an opportunity: ‘...a *blessing in disguise...*’ (GT). The reasons for this type of response were varied but included the chance to spend more time with family during the extended recovery period. This was particularly so for individuals who were very career focused pre-injury. Another individual described discovering how supportive friends and neighbours were when complications from the initial surgery meant she was still unable to weight-bear on the affected leg eighteen months later. Perhaps surprisingly, a keen cyclist saw the routine bone density scan he had post injury as an opportunity to satisfy a longstanding curiosity about his bone strength and another in his 30s described it as a: ‘...*wake-up call...*’ prompting him to take better care of longstanding diabetes:

‘...my diabetes was...out of control but...got worse in there [hospital]...I realised I had to do something with my life...I’m the wrong side of my 20s ... thought I’d better sort myself out now rather than later...I knew the hip accident was gonna make things worse for me...which it did...’
(JH)

This type of response was also noted by a healthcare professional *Collective Voices* reviewer who reported that individuals with unhealthy lifestyles often saw the injury as an opportunity to change unhealthy pre-injury habits to achieve a positive outcome from a negative situation.

Connected to this sense of opportunity, a number of participants described their injury and recovery experience as a positive benefit to them. This was often because it provided a chance to reflect:

‘...its really really good for...the soul and self-reflection... quite an adventure...you learn...a lot about yourself when...you’re stuck with yourself for such a long time...’ (GT)

This period of reflection led some participants to re-evaluate their lives and resulted in positive life decisions they felt they would not have taken otherwise:

‘...it was quite hard at the time but...quite good to go through these hard times because it does teach you a lot...you do come out...a much stronger rounded person than...when I went into it...’ (PBW)

This often concerned making positive choices about what they wanted from life. For the participant above this was spending less time at work, overcoming shyness and getting married whereas other individuals were less specific: *‘...I’ve found myself again...what actually makes me happy...’ (GT).*

A number of participants had experienced a range of subsequent health issues since the hip fracture. This may not be surprising as in most cases a number of years had passed since the fall. Interestingly some had since had osteoporosis diagnosed which had not been detected at the time of the hip fracture. Participants however, also identified other health conditions developed in the intervening years as having a greater impact on their lives:

‘...Parkinsons is something I’ve got to live with for the rest of my life....that has much more impact...and I know probably [pause]...it’ll

get worse...whereas the fracture...as far as I'm aware is not going to get worse.' (RB)

Thus the emotional impact on participants was a major feature of their stories. It was varied in nature, highly contextual and often long-lived.

4.4.3.2 Work and finances

Work and finances formed a major part of almost all the participant stories. This is perhaps unsurprising as over two thirds of participants worked outside the home. Key findings in this sub-theme relate to: time off work; the effects of being unable to work; the process of returning to work; and the long term work and financial implications of the injury, each of which will be discussed in more detail.

The fall resulted in what was for most participants their first period of extended sick leave. It was also a new, previously unanticipated experience and participants reported a strong desire to return to work quickly. This was frequently related to financial difficulties resulting from loss of income, which will be discussed later in this section, but also concerned the loss of self-worth, normality and opportunities for social interaction that working offered. Despite this, participants simultaneously reported dreading returning to work as illustrated by this comment:

'...nerve wracking...I was a bag of nerves...dunno why...think it was the fact that you've been away for that long...it's like starting all over again...' (PS)

The period of sick leave varied enormously from two to four weeks to six to eight months and occasionally to more than a year. This depended on the type of injury, surgical intervention and work role of individuals. One participant, a self-employed business man continued to work in severe pain for two weeks post injury before seeking medical attention specifically because of the potential impact of his absence on the business and family finances. A small number of individuals did not work for a relatively short period of two weeks and were then able to work flexibly from home, often for an extended period and sometimes whilst officially on sick leave. They reported psychological benefit from this as it enabled them to preserve their work identity and feeling of self-worth despite being away from work:

'...tech guys took control of my computer at home...downloaded everything I needed...so it was quite good...I was still feeling [pause] like even though I was off sick...I was contributing...staff would occasionally phone me up with queries...so that all went quite well.'
(SF)

Whilst working on sick leave may not be ideal, it did facilitate ongoing contact. Nevertheless, even participants having regular contact with work colleagues were worried about going back. This was often after a period of three months or more and although such participants described the value of being informally kept up to date by friends at work, they also had concerns such as meeting new colleagues and being able to use new work systems deployed during their absence. Others were absent from work for a number of months and there was variation on return to work policies. Some participants returned to office work on crutches but others

were prevented from doing so for health and safety reasons. For some individuals, the physical nature of their job meant a period of three to six months of absence.

In hindsight, some participants recognised they had returned to work before they were really recovered enough. A staged return to work was almost universal. This included gradually building up the hours per day, days per week and duties undertaken, over a period of weeks. The majority of participants however reported that even a graduated return was difficult.

'...I was still in such a lot of pain...I struggled...even now, sometimes it's so hard...but I just keep going because I need my wages...I'm on my feet all day...stepping up and walking...I know I'm not as capable as everybody else...like I let the side down somehow...feel like I've aged about fifteen years...' (DH)

The difficulties individuals cited varied according to their circumstances, type of work and employer requirements. A common experience for many participants was becoming more easily tired. This often related to limited mobility, the use of walking aids on initial return to work and the need to expend more effort on walking. The injury also resulted in newfound difficulty with other job related activities such as lifting, getting up and down from the floor, climbing stairs, getting in and out of the car and for a physiotherapist participant, demonstrating physical exercises to clients.

Participants often reported a limp when they were tired or after a full day at work which was commented on by colleagues. This was reported by participants five years or more post injury as well as those injured more recently. Although as the comment above illustrates, some participants felt less productive in their role post injury, being slower due to reduced leg strength/stamina or taking less work home in the evenings because of feeling more tired at the end of the normal work day, others were keen to emphasise their full return to normal working. Nonetheless, these participants also offered examples of adaptations they made to enable them to function well at work. These included avoiding some tasks, maximising mobility by tailoring the work schedule to include a mix of walking and stationary periods and taking more care with lifting.

Generally the more autonomy and support participants had at work the easier this was to achieve. Many participants highlighted the positive impact of support they had from employers and immediate line managers. This included provision of a graduated return to work, limited case-load, period of supernumerary status, access to designated parking and private physiotherapy. Two participants, injured more than five years ago, were keen to stress that the vital support they had received would not be available to others in the same position today. This was due to recent changes to organisational absence policy and fiscal pressures. Examples included changes to the national pension rules and removal of a graduated return to work scheme by an NHS community healthcare organisation.

Whilst for most participants there was a personal motivation to return to work quickly, financial worry resulting from lost income was also a major driver. The majority of participants were employed and noted the continuation of their salary and access to sick pay as crucial:

'...it could have been a whole lot worse...you've got the mortgage... food and what have you...without that money...you get all the stress...'
(PB)

Nevertheless the injury had major financial implications for most participants. These included the potential loss of a business for one self-employed man. The financial impact was particularly striking for participants with dependents, but conversely was also a specific worry for those living alone without the support of a partner. In addition, lost income meant some individuals were unable to afford the private physiotherapy and other temporary practical support e.g. with housework and gardening, that others funded privately in response to a lack of statutory provision. As illustrated by a previous participant comment, financial difficulties meant that individuals often returned to work still in pain and not fully recovered.

The impact of the injury on their finances forced some to consider the fragility of previously taken for granted personal independence and resilience as this comment from a divorcee illustrates:

'...I've never worried about being out of work...but if I was unable to work...suddenly the reality hit...I might not be able to physically work...I haven't got the money coming in...I would lose everything...' (SF)

This impact of the injury on future work role was a key part of the narratives. It often resulted in a different perspective on the future for participants in terms of work. For some, including the example above, this concerned future ability to work whilst for others it focused on managing enduring physical complications such as pain in cold weather, when working predominantly outside. For one individual however, who had put off her own career to raise children and then undertaken years of study to enable her to progress at work, the injury resulted in her missing a non-recurring examination deadline and what she experienced as the loss of a desired future:

'...I'd been working for six years to achieve this and it's been taken away from me now...I've got to stay where I am, doing what I'm doing...it is a loss...that was my chance and I don't think it'll [pause] come again...' (DH).

Thus the findings in this subtheme illustrate a range of work and financial impacts experienced by many participants as a result of their injury. These issues were also specifically highlighted by healthcare staff during the *Collective Voices* review. Details differed often according to the individual's work role and the associated absence, particular injury and recovery required. Thus, the specific circumstances of participants and the degree to which practical and financial support was available to them from an employer were also important factors in determining the impact of the injury.

4.4.3.3 Identity

Personal identity was a core feature of each participant story and the findings on this topic fell into a number of categories. They included issues concerning the loss of or changes to pre-injury self-concept. These were temporary for some participants, or in some ways, but more enduring for participants overall. Changes to self-image were specifically highlighted by a *Collective Voices* carer reviewer. New identities and perspectives on self however were also forged by participants as a result. Changes to work and financial identities were closely connected to the work issues and financial independence discussed in the previous subtheme. Some participants did not return to work and others returned for a period of time then left. In addition, the injury provided a new perspective on life and stimulated early retirement for some individuals whereas for one or two others retirement due to ill-health was the outcome, usually as a result of the discovery of other health conditions post injury.

Financial identity was a key part of many participant stories. As previously discussed, threatened financial stability and independence was the main feature of this aspect of the narratives. This put some individuals off seeking medical help in the first place and was a frequently mentioned concern that participants had often not even contemplated before the fall. In addition, other participant 'identities' emerged. Some, such as *Advocate* (for self and others) and *Proactive Self-Carer* had a positive focus, whilst others such as: *Victim*, *Liability* and *Malingerer*, were less positive.

A number of participants advocated for themselves, becoming in effect their own treatment co-ordinator as the recovery journey proceeded. This was often borne of necessity having experienced a lack of support or poor care and involved sourcing and orchestrating services to meet their own care needs. This included trying to manage healthcare staff and negotiate access to care for example by: following up on medical investigations, physiotherapy and occupational therapy support that were promised but did not materialise; organising access to home loan equipment and schemes such as subsidised transport to support return to work.

Consequently, participants also advocated for other hip fracture patients such as their own elderly relatives who they saw as less articulate, resilient or assertive. This concern for others with less knowledge or physical capacity to advocate for themselves in the same way as participants in this study often featured in the narratives.

In addition, the supportive relationship between participants and healthcare staff was not one-way as might be expected. On the contrary, there were also examples of participants advocating for staff and a range of examples emerged from the stories of individuals defending staff thought by colleagues to have behaved inappropriately. Participants often had a lot of empathy for the difficult job undertaken by healthcare staff in particular and their general ability to adopt positive, supportive attitudes overall in very challenging circumstances. This included a range of staff groups and contexts and positive examples of responses to the physical and psychological challenges they had to deal with when caring.

Participants were also understanding of staff errors which were based on what they saw as reasonable staff assumptions. For example, one individual saw the humorous side of numerous staff entering his A&E cubicle expecting to see a 70 year old man instead of a 39 year old, having apparently read the diagnosis but not date of birth in his medical notes. A further participant prevented A&E staff submitting a formal complaint against a GP for allowing him to drive himself to hospital arguing:

'My GP hadn't done anything wrong I'd...walked in...and because I could pass a certain test she assumed it was a really bad sprain...body just got used to the pain I suppose...' (ST)

Participants often adopted a positive mental attitude and proactive approach to self-care:

'...if you didn't laugh you'd cry...I have been told more than once by doctors that I do have a very positive mental attitude...I think that does help...' (SJP)

A wide range of positive attitudes emerged from the narratives. These included focusing on others who were worse off. Some participants felt they had *'...got off lightly...'* (SJP) and a large number adopted the same: *'...just have to get on with it...'* (SF) attitude as this participant. This proactivity was sometimes driven by living alone with access to limited support, but was often associated with other positive attitudes such as: *'...nothing's impossible...'* (GT), *'...it's mind over matter...'* (GB), *'...I journey hopefully...'* (RP) and *'...just have to make the best of*

it... (PW, JD). Participants were often highly self-motivated. The source of this drive varied by individual but included avoiding dependence on others for physical needs, wanting to return home, being able to do things they had enjoyed pre-injury and avoiding disability. Nonetheless, some participants also voiced their understanding of how others could be tempted to give up, one likening it to the depression that had resulted in her husband's recent suicide. Many participants described themselves as having a positive disposition and refusal to be beaten type of attitude toward recovery. Even so they often recounted having to 'push' themselves to do a bit more each day, frequently focusing on how conscientiously they had done the exercises they were given as illustrated by this comment:

'...I religiously worked through the list they gave you...exercises to do...I religiously did...everything it said to the day to the number... I thought it's a means to an end...the sooner I do this the sooner I'm back up and out the door...' (PW)

although there was also a balance between: *'...trying to keep your leg going... pushing it but not [pause] overdoing it...'* (LS).

A number of participants used goal-setting to help achieve their recovery aims and others focused on the hope of technological developments that could offer new treatments in the future. Many individuals had organised aspects of their own care or private treatment to facilitate their recovery. This included having to ask for what might be considered standard treatment to support rehabilitation and future health such as physiotherapy, bone density scanning and occupational therapy

assessment. One participant described having to demand referral to a consultant following the onset of severe acute pain post discharge which ultimately resulted in her having further surgery a few days later. Despite this approach, friends and healthcare staff often expected participants to recover and be mobile more quickly than they were and some individuals reported friends and family remarking on their slower recovery:

'...so and so's in their 70s had a hip replacement and they're doing better than you...they're just concerned...but sometimes the last thing you want...is being told that [laughs]...' (LS)

Despite this participants were keen to be seen as normal and tried hard not to let others see their limited mobility. This often continued for more than a year post injury:

'...you don't want other people to see that you've got something wrong with you...not wanting to be different...I'm not disabled so I don't want to walk like I am...when I walk it's obvious..."oh have you hurt yourself?"...people... say to me...' (DH)

and for others included actively trying to hide their limitations for over seven years;

'...don't think they saw how badly...they could never understand...for instance when my daughter said ooh...come down to London...I said I can't sit for that long on a train...because...when she'd come up obviously you put on a bright face cos they're not there for that long...she obviously thinks it's fine and it's not...' (VJ).

Yet participants described the difficulty of undertaking this positive, self-care role on top of work and other responsibilities. In addition, the substantial cost of funding self-care such as private physiotherapy, osteopathy, aromatherapy and home adaptations to enable them to cope with ongoing pain and physical limitations was a concern shared by many participants. The comment below illustrates the commonly held view of many who whilst very proactive about helping themselves to recover, also felt let down by the lack of support they received:

'...there's too much self-help...I've had to do so much for myself...but then again I was that kind of person...had I not been...I probably would've... withered away...' (VJ).

Consequently, the very active role all participants took in supporting their own recovery, may further contribute to the relative invisibility of the impact of this injury in this age group. This often involved for example, organising and paying for rehabilitation treatment and actively avoiding seeking ongoing medical advice whether because of limited free time or for fear of the need for further surgery.

A small number of individuals appeared to take on the identity of '*victim*'. This included one participant who had missed out on sickness benefit and another who felt his partner blamed him for what was actually an accident because of her belief that cycling was dangerous. In contrast, some individuals described being cast as victims by others. These included a nurse and a police officer who volunteered their support and witness statements to participants who fell in public places. Their motivation was to improve the walking surface having witnessed similar falls in the

same place. Most of the participants in this situation however did not pursue redress. Some had chosen instead to concentrate on recovery rather than looking back or spending limited energy on pursuing a legal claim. Others had been advised that proving blame would be too difficult although one participant did have legal proceedings in progress. Furthermore, one individual who was in receipt of poor hospital care did not report it because of her previous experience of what she perceived to be victimisation having spoken out before:

'...I haven't spoken to a single person who hasn't said if you complain while you're in hospital you get punished for it...that's why a lot of us don't make any complaints...if your outcome is I won't get medical care then you put up and shut up...' (AVS).

A number of participants recounted having to come to terms with a new identity as a result of the injury along with the transition and dissonance associated with this:

'...I'm not particularly young but not particularly old so walking about with a zimmer and everything was just really bizarre...' (JD).

For female participants in particular it involved regret for parts of themselves they had lost, as this individual explains seven years post-injury:

'...it is a...psychological thing wearing heels for a woman...if you've got a really nice dress on or... look really nice and feminine... and then you put on what I class as dog walking shoes the whole effect is ruined...it's... like a loss of your femininity having to wear awful sensible flat shoes...' (SJP).

Similarly, other participants sensed a loss of part of their previous selves as a result of the fall. This included regret that life partners had only known the post-injury 'self' with its associated limitations, as this example five years post-injury illustrates:

LS: he knows me how I am now... he never knew me before I broke my leg...it would've been nice to have thought he could've known the old me... cos there is that sort of little differences of how I am
GJ hmmm [pause]...you're talking about the old me it's almost like there's [pause] there's two yous...
LS yeah
GJ a before and an after
LS yeah [pause] I'd probably say that's fairly correct [laughs]... it's one of those life changing moments

Thus, some participants appeared to mourn their pre-injury selves even a number of years later.

Summary Theme 3: Impact on self

These findings indicate hip fracture often had a multifaceted and often long term effect on participants. This included emotional impact, work and finance issues and altered self-concept. Regaining independence, avoiding disability and returning to work and other activities as soon as possible were priorities although the fall precipitated re-evaluation and restructuring of lifestyle and finances for some. Seeking medical advice for ongoing symptoms was uncommon either because of limited time or fear of further surgery and may contribute to a lack of

visibility regarding the needs of this client group. Changes in individual sense of personal identity from the physical and emotional impact of the injury were often enduring.

4.4.4 Theme 4: Impact on others

A key feature of participant stories was the impact their injury had on others around them. Whilst varied in nature this included spouses and partners, parents, children and members of the extended family as well as work colleagues and friends. The impact on pets was especially important for some participants and was specifically highlighted by one of the *Collective Voices* reviewers. Overall impact on others emerged in three main areas. This theme therefore explores the specific nature and extent of these issues in more depth in the three sub-themes that follow: *Practical impact*, *Psychological impact* and *Impact on relationships*.

4.4.4.1 Practical impact

A small number of participants reported minimal practical impact on others:

'I have always done my shopping...online...I could just sit and do that then it was delivered so...apart from the...general things in the house really...there wasn't loads to do there's only me and him...so yeah we got on ok.' (JD)

However this was the exception rather than the norm. The degree of help participants reported needing with personal care and other activities of daily living

such as bathing and dressing, shopping and cooking, basic housework and transport to appointments for example, was often substantial. This was mainly due to limited mobility resulting from the need to use crutches or a wheelchair for a number of weeks. For some individuals, particularly those who developed complications or required further surgery, this period extended to months. As a result, the extensive practical support provided by others emerged as a key issue from the narratives. This support began immediately post injury for many participants and continued throughout the recovery journey, stretching into years for some.

Perhaps not surprisingly, where participants had a spouse or partner, they provided the majority of support and bore the greatest impact. This took the form of providing most of the practical support needed whether this was personal care or taking on roles and tasks normally undertaken by the participants. These included assisting with personal hygiene, preparing meals, learning how to use household appliances such as a washing machine and cleaning the house. Where necessary this was enabled by carers being self-employed which facilitated flexible working or supportive spousal employers:

'...it was a huge upheaval...so many things...fell apart and meant poor [husband's name removed] who works really really hard ended up having an extra day added on to his day...his work were brilliant they...gave him...compassionate leave...which was really welcome because it would've put so much of a burden on him...if his work hadn't been flexible...' (AVS).

Some individuals also acknowledged the additional work that hosting visitors for the injured individual meant for carers. Just over a third of participants lived alone and therefore either moved back to live with parents or other members of the family, including adult children living hundreds of miles away, who moved in to provide the care needed:

'...eventually got home (laughs)...to my parents...you can't carry...lift anything...shower yourself properly... bend your knee so you can't even...dry your foot never mind put a sock on it (laughs)...it's a lot to ask, my parents basically had to look after for me...probably about six weeks I was there...they had to cancel a holiday and...different things because they were worried about leaving me on my own...you don't really expect in your 30s (laughs)...to have to go back into your parent's...because you can't look after yourself.' (LS)

Where possible, siblings shared the task co-ordinating stays with work and other commitments such as taking examinations. This often continued for a number of weeks which participants were aware created major disruption to others' lives. Such practical support often required extensive travel and had major implications for others, which also involved extended family members and ex-partners. For one individual this meant a weekly five hour round trip for her sister who visited to clean the house, provide meals and other practical support. Her involvement in a serious car accident during one of these journeys led the participant to experience terrible guilt, even five years later, for putting her sister at risk as a result of her fall. Similarly, a carer specifically highlighted the regret she felt at not being able to give the level of care she aspired to because of other priorities: *'Sadly I was too*

wrapped up in other stuff to give extra support...'. This highlights the potentially enduring effects for carers too.

Examples such as these illustrate the complex practicalities of caring and possible complications that can arise due to the geographical spread of family carers who were often also juggling other responsibilities such as full-time work and caring for other dependents. They also highlight the associated psychological impact on the person needing support. This sheds light on the complexity participants encountered in accessing what might be considered basic everyday support in the early weeks and months post injury. This was particularly so for participants who lived alone. Nonetheless, even for those with a spouse or partner, practical issues sometimes meant relocating for an extensive period of time following surgical complications:

'GT: I stayed at my parents'...for 8 months in my bedroom because I couldn't negotiate the stairs...have not seen my house since I did this... very near a whole year now.....

GJ: ...you mentioned that you're married so are you living separate to your husband

GT: yes...he works long hours...and he wouldn't be...around ...my husband comes to visit, family and friends have been to visit...my husband will take me to Morrisons...and to the pub...there's no way my mother could do that...'

This participant actually spoke of trying to make herself invisible by: *'keeping out of the way'* when her parents had guests because she felt like a burden, restricting their social activities.

As all participants were of working age, the impact on work colleagues often featured in their stories. This ranged from colleagues, or competitors, as in the case as one self-employed participant, providing practical cover which prevented the likely closure of his business, to organisations having to replace highly trained and experienced staff such as this airline pilot. His decision to resign was precipitated by the fall and subsequent injury:

‘...the whole [pause] raft of experiences I had through the entire kind of 18 months of...recovery [pause] have [pause] led me to the fact that I gave in my notice...it has been life-changing...’ (JP).

Thus the practical impact on others as a result of this injury was wide-ranging, extending much wider than family and friendship networks.

4.4.4.2 Psychological impact

Wanting to protect others had a two-way focus with examples in the narratives of participants trying to protect others and others wanting to protect them post-injury. For example, one individual postponed seeking medical attention because of the likely impact on his business and his son’s birthday party. Other participants gifted shoe grippers (Wintertrax) to each family member. This was an attempt to prevent loved ones falling and sustaining a similar injury, however participants were not always convinced these gifts were actually welcomed. Although multiple co-morbidities were not a feature of most participant stories, where this was the case there was a clear desire to protect loved ones. For example, this participant with a hereditary condition, focused on her daughter and grandson:

'...I try to reduce the worry...try to be happy...I'm more miserable when I'm by myself...for them I put on an effort of being ok...especially my grandson.' (MW)

Thus, in protecting others this individual seems to have limited her own access to the emotional support from key family members that was often cited by other participants as important. She was not alone, as other participants gave examples such as: a son who was cross with her for falling because he couldn't cope with a parent being ill and was looking for someone to blame; a son who avoided visiting because he preferred to see mum well i.e. after she had recovered; and a husband who:

'...doesn't do illness...he just sort of gets irritated...so if you don't feel well I keep it to myself.' (HEW)

In contrast, examples of loved ones trying to protect the injured individual were a frequent feature of participant stories and included pets as well as humans. This illustrates the psychological impact the injury had on those connected to the participants and included examples of advocating for a loved one in hospital:

'...I was crying...I'd already pressed my buzzer and asked for pain relief... wasn't forthcoming...my mother had been to the desk to say my daughter needs pain relief that request was still not acted upon so she had to go back to the desk bang her bang her fists...to say would you do something about my daughter now please' (GT).

This advocating for participants also involved trying to reduce their risk of further injury. Some of the resulting actions such as providing specific footwear to help

prevent a further fall were appreciated by participants. As a result they also accepted restrictions, even on activities perceived by anxious loved ones as risky, purely to help reassure them. For one individual this meant giving up his beloved motorbike which his mum perceived as dangerous even though this was not the cause of his injury. This protectiveness of loved ones versus maintaining participants' independence appeared to cause friction in personal relationships at times:

'...if...I can do something I'll try, if I know that I can't I'll stop but my sister and [husband's name removed]...think whatever I need to do I'm gonna do it whether it's hurting me or anything but I'm not that stupid...I wouldn't...put myself in danger.' (PAS)

Some individuals maintained their independence by breaking promises they had made, such as this one to her daughter:

'...she never knew I was having baths (laughs)...she used to phone ...to make sure I was...ok...if she'd known that when she went [pause]...she...used to worry about me going up and down the stairs...' (MES)

and others by avoiding discussion or hiding evidence of contentious activities. This was a particular feature of the stories of participants injured whilst cycling. For example despite an awareness of the negative psychological impact of his injury on his son this individual describes his continued, covert use of cleats which his wife considered risky, and her discovery of this:

'...normally I'd keep them in the bedroom...but I took them in the shed...so if she was in I'd go to the shed put them on...then one day...she was sat in the garden...and as you walk you can hear click click click...I thought shit she's going to say something now...a few days later...she says how long have you been wearing them again...I said oh the first time...yeah I bet it were...(laugh) she says...you'll end up doing it again (laugh) but (clears throat)yeah...' (PB)

It appears these conflicting views of risk may be due to differing perceptions of impact between the participant and their loved ones:

'PB...I understand where she's coming from but...if I did it again (clears throat) I probably would have a hip replacement...but...cos I get paid from work...if I did something else...we're not gonna suffer...you know what I mean

GJ: money wise?

PB: yeah...we've been there...I couldn't really afford to be off work...now...we ain't got that financial worry...plus I don't stop her doing what she wants to do and...she's not going to stop me in what I want to do (laugh).'

This participant appears to focus predominantly on the potential financial impact of a further fall whilst it was frequently the emotional impact of the injury on loved ones that others recounted. The delicate issue of effectively balancing the impact of others being protective/over protective with the participants' sense of independence and self-determination was therefore a frequent feature of the participant stories.

Whilst some participants reported little or no impact on their children others were aware of psychological effects on a four year old grandson and their teenage children as illustrated by comments such as: ‘...*me mum breaks easy...*’ (DH) and ‘...*he always reminds me you fall off bikes don’t you...*’ (PB). Such comments indicate potential underlying emotional impact on children in participants’ personal networks that was not further explored.

4.4.4.3 Impact on relationships

The reported impact on participants’ relationships was mixed. There were examples of positive changes such as the opportunity to spend more time with young children as a result of being at home for an extended period; helping a disabled mum to be more mobile as a result of having to use a mobility scooter himself; and the opportunity to spend more time developing better relationships as this participant recounts:

‘...I got really close to my mum...suddenly I had all this time when I wasn’t working...so that was quite a positive thing...’ (PBW)

This individual goes on to describe how he developed better relationships with family and friends through choosing to spend more time with them as a result of his accident and reduced work focus. This prompted him to make important positive longer term lifestyle choices. Participant stories however also included a number of challenges concerning the impact of the injury on their relationships with others. These included role reversal. For example, the parent in the

relationship became the child figure needing care, although as this participant recalls this sometimes had a positive impact:

'...there's only been my me and my daughter for most of her life and...mum's always been there...the strong person that sorts everything out and for...4 months I was almost like the child...had to rely on her...it gave her an insight that she could cope...' (MES)

For this mother daughter duo, the participant's injury had an even more important consequence. A routine post-accident welfare visit by a work colleague resulted in opportunistically surfacing death threats from an abusive neighbour that had previously driven the participant to contemplate joint suicide with her daughter as the only escape. Ultimately this home visit, which was precipitated by her fall, enabled the participant and her daughter to relocate and begin new lives without fear of intimidation.

The multi-faceted nature of the impact of the injury on relationships is further illustrated by the following example. For this participant, a year's forced separation from a partner due to surgical complications and the unsuitability of their own home for her resulting physical needs was bittersweet. It did however enable a closer relationship with her parents:

'...the more time I spend here with my parents the [pause] less I have in common with [pause] my husband.' (GT)

Similarly, other participants with longstanding complications following the injury were involved in complex interpersonal relationships with siblings who volunteered practical support but then appeared to resent it. This made the participants concerned feel both annoyed and guilty. The injury also limited the ability of participants to support others by recommencing pre-injury activities such as dog-sitting, or caring for dependent relatives. This included elderly parents for example and created tension with those needing the care and siblings in the family care team:

'...I can't look after them...one of my sisters goes...in the morning...then I go...in the afternoon and evening cos my sister goes...to work...I can use the phone...get them help...mum can get really quite demanding...I don't think she realises I can't do what the others can...when your parents get older it's a role reversal...it upsets me cos I can't physically do it...' (LL)

The expectations of others also had an impact on relationships in other ways. For example individuals recovering more slowly than anticipated by friends experienced interpersonal friction, self-doubt and ultimately broken friendships. One example of this was a participant who experienced difficulties in her relationship with friends. This followed three major operations over a period of more than eight months to repair the original fracture which had still left her with residual physical limitations:

'...they were sort of saying I was playing on it...I should be able to [pause] walk [pause] they said I've had a hip replacement and it's a six week recovery...' (LL)

As a result, this participant no longer socialised with these individuals. This issue of the changing attitudes of family and friends toward individuals whose recovery took longer than expected, particularly compared to their previous experiences of friends or family following hip replacement, was specifically highlighted by a carer during the *Collective Voices* review in support of the findings in this area. In contrast, there were other examples of social relationships in which the injury appeared to help cement mutual understanding and support which were often characterised by the use of humour:

'...my best friend...has rheumatoid arthritis...each time...we say good bye...try not to fall (laugh)...we say to each other (laugh) it is a standing joke...try not to fall.' (SJP)

Injury related physical limitations, which often persisted for a number of years after the fall, meant some participants missed important family events. These included accompanying a daughter to choose her wedding dress, a rare opportunity to spend time with a son living abroad and missing the school holidays with a 13 year old son. The sense of these being one-off, irreplaceable events was particularly strong for participants, some of whom stated they could not begin to put into words how difficult this had been to endure.

Although not for all participants, the injury also generally had an impact on others by limiting the participants' ability to fully engage in previously shared leisure activities such as long family walks. Individuals recounted examples of either declining invitations or friends/relatives adapting the proposed activity to enable

them to participate. This was due to enduring impaired mobility, pain or reduced exercise tolerance which often persisted for many years post injury. Their own limited awareness of the longer term impact of this type of injury was a recurrent feature of participant stories which they described as being mirrored in others around them. This issue was closely related to the leisure activities sub-theme discussed in Theme Five: *Moving forward* later in this chapter.

There was also evidence of psychological impact on people in the participants' networks. In some cases this precipitated major life decisions such as the one this individual described:

'...people have realised...it...only takes an accident...to change...your life... one of my colleagues...it's brought it home to her how easy it is...how it can change your life...so she decided...she would take her retirement while she was...fit and able...it shook her...I did like climbing up the walls...she thought if I'd have broke my neck...doing that...that was understandable (laughs)...but not (laughs)...walking through a bus station...' (MES)

Psychological impact however was not just restricted to work colleagues but often also included family and friends. Participants described family and friends having to come to terms with the serious nature of the injury which they had originally envisaged as just a broken bone. As a result, observation of their injury experience also prompted people in the participants' networks to consider the implications for their own health. This included for example, the female relatives of a 33 year old

participant seeking osteoporosis screening to determine their own risk following her injury despite her bone density scan being reported normal.

Summary Theme 4: Impact on others

The findings in this theme illustrate wide-ranging impact on members of participants' extended personal networks. This included family members, co-workers and friends. Whilst this was temporary for some, it was commonly long term and still ongoing up to ten years post injury. Providing practical help for participants with basic daily activities during extended periods of reduced mobility had a big impact on others. This sometimes resulted in substantial disruption for relatives juggling caring with work and other responsibilities. Psychological impact on others included relatives trying to prevent another fall and vice versa. Impact on relationships was mixed. Some were enhanced and others disrupted due to differing perceptions and expectations regarding recovery and perceived risk of further falls. In addition, the injury was a catalyst for some individuals in the participants' networks to make their own major life decisions, such as taking early retirement, re-location or evaluating their own risk of similar injury.

4.4.5 Theme 5: Moving Forward

The findings in this theme emerged in three main areas. The first of these related to *Staying active*. This focused on leisure and everyday activities pre and post injury and is discussed in the first sub-theme in this section. The second set of findings in this theme concerned a range of *Residual limitations*. These included

surgical complications, impact on everyday activities and the implications of health conditions discovered as a result of or since the fall. The third and final sub-theme in this section: *Concerns for the future*, addresses findings related to participant perspectives on the impact of the injury going forward. This final section therefore focuses on findings concerning the implications of further surgery, maintaining independence in the long term and maximising future bone health.

4.4.5.1 Staying active

All participants described themselves as active. For some this related mainly to everyday activities of living whilst for others, maintaining physical fitness and participating in other more strenuous leisure pursuits was a major aspect of their lives. The activities participants regularly engaged in pre-injury ranged from very regular and relatively strenuous activities such as trekking 8-10 miles in rugged terrain, horse-riding, running, cycling, diving, motorcycle time trials, parachuting and dancing; to less strenuous but regular activities such as golf, swimming, gardening, shopping and walking. The need to remain active was a key feature of the narratives both as a means participants used to support physical and psychological recovery and as an apparent underlying characteristic of them as active individuals generally. The findings suggest that the individuals who fell whilst cycling were less likely to limit their subsequent physical activities than others. Cycling or other fitness activities were often a major, long-standing part of their lives and also became part of their recovery:

‘Running was all I did...so to have that taken away...so introduced exercise back in via swimming and riding a bike...which for me is

important...I'd got to have some form of exercise in my weekly routine.'
(GA)

Although the actual activities individuals described in relation to staying active varied, they mainly focused on physical, exercise-related pursuits. Participants discussed these in terms of the activities undertaken and their place in the broader context of their lives, general fitness pre injury, stage of recovery and future goals. Participants generally based their post injury functionality, fitness and activity goals on their pre-injury activities as well as medical guidance on expected post injury ability. The findings indicate that although focused on recovery as regaining functionality, participants consciously took into account their pre-injury fitness and activity levels in determining post-injury goals:

'I'm not a fitness fanatic [pause] but I do like walking...not...hill walking or anything but I...do like to walk everywhere...just being able to do things like that [pause] mostly that I could do before...gardening and stuff like that...' (JD)

Individual goals however, varied widely. In contrast to the example above, other participants had walked 10-12 miles or cycled daily for more than 20 years pre-injury as active members of cycling clubs. These varied pre-injury activity levels as reflected in participant narratives did therefore result in a varied range of individual participant expectations and goals regarding staying active post-injury.

Some participants described just not being able to undertake previous sporting activities such as playing squash, football with a son or keeping a pet dog due to

residual pain and limited mobility. On the contrary however, others found their usual leisure activities such as cycling easier than walking:

'...to get to the airport and onto the plane I needed crutches but I knew I could ride...because the action of riding a bike... [pause] didn't hurt.'
(PST)

These participants therefore returned to activities such as cycling, often in a graduated fashion, relatively quickly. New approaches were also adopted by individuals to enable them to continue engaging in pre-injury activities. Sometimes this was for physical reasons, but in other cases it was more psychological. For example cyclists generally returned to cycling but were more careful, went slower, approached common obstacles such as kerbs or railway crossings differently or started wearing a helmet. In common with other participants who preferred walking, they also avoided going out alone so that help was at hand should another accident occur. The constraints of the physical environment meant that one participant found new ways of manoeuvring herself in and out of a swimming pool because she could no longer effectively negotiate the ladder and there were no graduated steps into the pool or hoist available.

Adaptation to accommodate post-injury limitations was a strategy participants frequently used to enable them to continue engaging in pre-injury leisure activities. For example those who enjoyed dancing danced fewer dances, more slowly and less energetically, and others did shorter walks than would previously have been the case as in this example:

'I can probably do 3-4 miles comfortably...a bit more at a push with tablets (laughs)...before I could easily walk 8-10 miles...in the Peak District...you feel like you can't really join in unless they tailor it to a short walk.' (LS)

Although participants did not necessarily use this term, risk assessment of proposed activities was a feature of the narratives. This included being more aware of the context in which the activity was undertaken, reporting for example, a new reluctance to cycle in the rain or climb in snow. It also involved seeking more detail on the type and duration of proposed activities before agreeing to participate. Some individuals described employing their professional skills to minimise future risk whilst continuing to engage in favourite leisure activities as this airline pilot explains:

'...it's what I've been trained for...look at situations...analyse...come up with a plan that's more likely to succeed if that makes sense.' (JP)

There was apparently one exception to this type of cautious response to activities as this participant stated: *'...if it's snowing outside it wouldn't bother me at all I'd just go out...'* (HEW). However, this was despite the same participant having previously described a post-injury reluctance to go out alone:

'I don't go out for walks on my own whereas before I would...it didn't enter my head that I might fall but now...I've never...had to rely on anybody else but now...I wouldn't dare go out on my own.' (HEW)

Therefore although this individual found some circumstances e.g. snow were inconsequential she had actually adapted her approach to normal leisure activities in other ways post-injury.

Whilst participants were appreciative of friends and family adapting activities to accommodate their needs they also sought to minimise the impact of their limited capacity on others. The following comment illustrates this in the context of a diving holiday:

'easy falling off the boat but you've got heavy tanks...it wasn't good getting back up the ladder again...I've got to pass all the weighty things out...back in the boat again...I couldn't walk from the hotel to the town centre of an evening because it [hurt]...if they were going...I would just stop n eat in hotel...didn't cause anyone else any grief...if I can't do it myself I wouldn't have done it...all worked out in the end...' (GB)

Participants also recounted examples of limiting their physical activity such as avoiding invitations to participate in leisure activities with colleagues. These were often based on previous experience of pain or tiredness, which gave participants an awareness of their own physical capabilities post injury. Some participants also limited their activities for other reasons. These included one individual declining a boat trip with work colleagues for fear of them judging it inappropriate should she be injured during the activity. Still others feared causing further damage to the injured joint from cycling, yoga or playing badminton.

Individuals were sometimes clear on what activities to avoid, such as breast stroke and running, having been given specific medical advice regarding these. Whereas a fear of having to come to terms with not being able to do pre-injury activities made some participants avoid these completely. Such self-imposed limitations were compounded by a reluctance to share these feelings with others:

'it's very difficult to explain to anybody...what happens to me I become very vulnerable...but I couldn't say to anybody I am absolutely terrified...petrified...' (MES)

This perhaps perpetuates the limited visibility of the longer-term impact of this injury in this client group as a result.

Nevertheless, some participants avoided activities they enjoyed purely for the benefit of others. An example of this was gardening from a wheelchair, which was perceived as risky by loved ones and was therefore avoided by the participant to reduce their anxiety. Other contextual issues had an impact on participant ability to regain previous activity levels and future engagement in leisure activities. For some individuals this was due to the effects of other health conditions such as Parkinson's disease and knee surgery which were unrelated to the fall. For others, making time to fit in exercise was more difficult post injury as they had returned to full-time work but were slower completing tasks which left less free time for exercise. They were also more tired by work and other everyday activities due to residual pain and limited stamina post injury, which further compounded this, often years after the original injury.

Participants' motivations for exercise and other activities varied. They included personal enjoyment, to support recovery by muscle strengthening or building stamina and a sense of obligation to maintain their ability to perform everyday tasks by preventing '*seizing up*' (GB). For some individuals, activities such as playing golf that began mainly for walking exercise to support recovery became regular long-term activities. This resulted in one participant becoming a triathlete once he was able to run again, as he maintained the swimming and cycling originally initiated purely to support his hip fracture recovery. Other participants took advantage of often extended periods of limited mobility to take up new activities such as art and craftwork. Those who were able, adopted new, more active pursuits such as running although some participants felt embarrassed and deliberately undertook these in private, further reducing their visibility to others.

4.4.5.2 Residual limitations

Residual limitations from the injury emerged as a prominent topic in the participant stories with individuals tending to focus on physical sequelae. These fell into six areas comprising surgical complications, new physical boundaries, impact on common daily activities, mobility issues, pain and the discovery of other conditions as a result of the injury. These findings were specifically commented upon by *Collective Voices* reviewers who reported that whilst some people experience good recovery, many go on to suffer poor mobility, further disability and other complications:

'Most people I have encountered have suffered significantly in terms of change in life style and daily ability.' (Paramedic 2)

Nevertheless some negative cases were also apparent in this sub-theme and these will be also be discussed here before the section concludes by examining some of the factors which the findings indicate may further compound the current silences surrounding this injury in this client group.

Surgical complications featured in many participant stories and ranged from relatively minor or short-lived to multiple operations over many months. The risk of non-union of the fracture up to two years post-operatively was a major focus in most of the stories as this comment illustrates:

'...what I worried about...was this...death of the hip bone...they kept...talking about...they warned me at the start...the upshot of that would be a new hip...' (JP)

Many were aware of the long-term implications of hip replacement at a relatively young age and were therefore keen to avoid it. A number of participants however did require further surgery. This included joint replacement for a persistent, severe limp, dislodged surgical pins or joint infection. There were delays of between two and eight months between subsequent operations which understandably had a significant impact on those concerned who were unable to weight-bear on the affected side during that time. One individual only realised one of the long-term implications of his hip replacement when he learned from his GP the potentially serious implications of a minor infection should it spread to involve the hip joint.

Participants highlighted a range of physical limitations post injury. Some were based on medical advice such as being told never to run again and to avoid breaststroke when swimming. A number of individuals reported not being able to twist or turn the injured leg to the same extent as pre-injury. This was related to the often limited range of movement expected after this type of surgery.

Participants also noted other boundaries they had imposed upon themselves. These were generally a result of having experienced pain previously such as when *'...doing too much...'* (FMc) or walking *...'more than half a mile...'*(DM) .

Conversely some stories illustrated the opposite approach, with participants pushing personal boundaries where possible, supported by the use of painkillers:

'...I can push myself now to an hour or so and then I can't do anymore [pause] so that's upsetting...but I don't let it get me down I just think oh well at least I've managed an hour...' (HEW)

Individuals often described the impact of post-injury complications on day-to-day activities. This study did not aim to formally assess the degree of hip function recovery although one individual did report having a residual deficit of 15%. Others noted that validated tools such as the Oxford Hip Score (OHS) and ED-5D, which are widely used to assess post hip fracture functioning and general well-being, were not very relevant for younger people as this comment illustrates:

'...the scales...they do (laughs)...didn't [pause]...seem to pick up some of the impacts that the injury...just...the questions...it's quite simplistic...yes I can put my shoes and socks on and yes I can walk...so most people would say well you should be grateful you can...walk three miles...but it's not what I was previously doing... when you're in

your 30s three miles doesn't seem a lot...it doesn't pick up the subtleties...because it's...measuring the hip...it doesn't pick up on the problems you're getting elsewhere...I know they try and back it up with the quality of life indicator...but...it's hard from those measures to pick up the soft side...the impact...more like emotionally on you or socially...it's all the other impacts that it has on you...' (LS)

Participants appeared to have realistic expectations and reported expecting some residual weakness rather than necessarily 100% recovery of their pre-injury capability. In spite of this, a number were still actively pursuing further recovery. This included funding private bi-monthly sports physiotherapy seven years post injury to reduce stiffness and support further recovery.

Many participants spoke of day-to-day limitations with everyday activities. Some of these concerned difficulty with gradients or stairs and prompted one individual to incur additional personal effort and cost by driving her own car to work meetings instead of using the free transport available. This enabled her to park close to and access the venue without negotiating a gradient or stairs. In addition, participants reported actively seeking out wider parking bays. These provided the additional space needed to accommodate residual weakness in the injured leg enabling them to get in and out of the car. Some participants deliberately changed their model of car to enable easier entry and exit with a weaker leg. Individuals also frequently reported an inability to carry significant weight when shopping or at work without pain in the affected leg. In addition, the ability to care for themselves, for example in putting on underwear or cutting toenails had become more difficult for some.

Whilst these issues had a range of implications for maintaining personal independence, undertaking household chores after the accident was a particular issue for some individuals and persisted long term as illustrated by this comment seven years post injury:

'...I can do most things....but I have to pace myself...I hate that really...I feel lazy to be honest...I hate the way it makes me feel about myself...' (VJJ)

The type of difficulty reported by the participant above may be connected to the problems many participants reported with getting up from the floor post injury. They often used furniture or other fixtures to help them return to a standing position and reported being much more conscious of how they would get up from the floor at home or work, than pre-injury.

An increased risk of burglary might not be commonly associated with post-discharge complications however this was a crucial experience for one participant:

'...found out...I had morphine in the house so my house was burgled...didn't take anything else...just took morphine and the tramadol...serious risk if you're sending disabled people out...you don't announce to the neighbourhood...here comes a very ill person on a stretcher...with bags and a bottle saying orimorph on them...' (AVS)

She had already been the victim of disabled hate crime and felt the nature of her discharge i.e. on a stretcher because the ambulance could not accommodate her wheelchair, increased the risk of further targeting.

Complications associated with mobility generally were a key feature of the findings within this subtheme. Walking ability was at the forefront of this, with many participants reporting being able to walk shorter distances, at a slower pace than before the injury. Some individuals also reported an altered gait and a feeling of ‘...*walking on stilts*...’ (RP), whilst others went further, reporting that six years post injury, the injured leg still did not feel like it belonged to their body. A number of participants noted a tendency for the injured leg to ‘lock’ or ‘give way’ without warning which further affected mobility. Limping was frequently mentioned both as something participants sought to avoid and as a common complication, particularly after walking any distance, when tired or having sat down for too long. Others often commented on the limp, which was a source of frustration as this participant describes:

‘...she said oh you’re still limping...I resent it a bit because I’m doing the best I can...I’m sort of lumbered with it...makes me twice wary because I don’t want a matching limp the other side (laughs)...’ (RP)

Participants also reported being much more conscious of walking which was no longer ‘automatic’ and actively altering their gait in an attempt to correct the limp when they noticed a ‘wobble’ i.e. the injured hip dipping when walking. Striking an appropriate balance between activity and rest was key for most participants in

managing the symptoms they experienced. This included planning ahead wherever possible, although taking analgesia before painful activities was the usual strategy rather than not joining in.

Pain, which was closely linked to mobility, formed a big part of the narratives with participants often focusing on the nature of the pain and the circumstances in which they experienced it. A number reported constant, background pain or discomfort, including a few who took regular analgesia to manage this. The duration of the constant pain described was up to nine years post injury for some people although they also noted this was something they could live with. This may be related to an earlier finding that most people expected some kind of residual effect due to the severity of the injury.

Overall however, participants also attempted to minimise the amount of analgesia they took, either preferring to manage without or because of previous side effects. The majority of individuals were generally fit and without other health conditions before the fall. Therefore this was the first time many of them had taken what they termed 'strong' painkillers. They were conscious of the negative effects this medication had on them, often resorting to other non-pharmacological methods of pain relief instead. For example, a warm bath, shower or ice packs were used to manage pain, as was resting with the injured leg elevated. The impact of the weather on the pain participants experienced was clearly articulated. Pain and stiffness were most pronounced in cold, wet winter weather and summer heat, which also left the injured leg feeling swollen and very heavy. Participants generally found it easier to cope with cold weather.

Different types of pain were identified. Some individuals experienced electric shocks or ‘...*impressive zingers*...’ (AVS) extending up the injured leg whereas others described acute spasm-type pain which meant they had to stop until it passed and still others experienced ‘...*clicking*...’ (RP). In addition, a number of participants noted being unable to lie on the affected side without pain. This often caused difficulty sleeping or required adaptation to everyday activities such as when reading to their children at bedtime. For some individuals, pain was experienced more as a form of pressure in the affected area than acute pain.

Participants described a range of causes for the pain they experienced. Both too much walking or other activity and sitting still for long periods caused pain and stiffness for many individuals. Ladies generally found that wearing heels post injury caused pain in the affected leg and for some participants pain was experienced in the non-injured leg, knee or back as they compensated for the injured limb. Although walking up stairs or gradients were more common causes of discomfort and were therefore avoided by some participants, it was descending stairs that caused acute pain at a later stage of recovery for one individual. Such difficulties were generally resolved by further surgery or ultrasound treatment although for some they signalled the onset of early arthritis. Despite participants avoiding seeking medical advice wherever possible, the appearance of new, relatively sudden severe pain was worrying and generally resulted in them accessing medical help.

Two participants appear not to have had routine bone health assessment post injury, a further six were found to have no underlying physiological cause for the injury and four were aware before the fall that they may be at greater risk of fracture. However for the remaining 18 of participants, investigation into the cause of such a serious fracture following a minor fall, led to the identification of other, previously undiagnosed conditions. For one individual this included chronic kidney disease and bipolar disorder. The remaining 17 had discovered they had compromised bone health due to abnormal bone density and/or low vitamin D levels. Some of these identified the cause as osteoporosis or osteopenia however others did not communicate a diagnostic label during interview. As determining the underlying cause of injury was not the aim of the study this was not pursued. However, a number of the participants who started treatment for osteoporosis as a result of the fall indicated they had since stopped taking it due to side effects such as gastrointestinal disturbances which they felt reduced their quality of life.

Although most participant narratives concerned complications they had or were experiencing following the injury, there were a small number of individuals whose stories did not. They reported no permanent change or physical limitations after the initial recovery period, often reporting being near 100% back to normal after between four and 24 months. They reported little pain and often did not think about the injury. The majority of participants in this situation had been injured whilst cycling and this activity had also formed a key part of their recovery. These individuals regularly stated that cycling was less painful than walking which may have contributed to their reporting minimal pain during recovery.

This group also differed from other participants who focused on walking as the mainstay of their recovery. Unlike cycling, this is a weight bearing activity and is therefore likely to be more painful post injury. Individuals reporting no permanent change or limitations however also described a range of symptoms such as a ‘...wobble...’ (GA), which was a limp when demonstrated during interview; a grating or clicking sensation; using painkillers or a whirlpool bath to ease pain and stiffness; and adapting their approach to everyday activities. This indicates they may have had residual impact they did not define as such or which was not particularly troublesome. It was apparent that participants reporting full recovery also had an almost complete focus on physical symptoms with little mention of psychological or social impact other than in the initial post injury period.

4.4.5.3 Concerns for the future

Looking forward to the future was a feature of most of the participant narratives. Some people stated that the accident had not affected their outlook, although most had concerns relating to the physical, psychological and sociological impact of the injury on their future. Many participants spoke of never being the same again and facing a different future to the one they had anticipated or planned for:

‘...it makes you think a bit more about life really...in your normal everyday life...you don’t...actually think about it...’ (JD)

Physical concerns about the future related to the prospect of further surgery, career and maintaining their independence. Most participants were keen to avoid hip replacement surgery at a relatively young age therefore those who had had the hip repaired rather than replaced were very relieved. Nonetheless the prospect of

further surgery was a very prominent feature of almost all the participant stories although for differing reasons. A number of individuals had been told they would need hip replacement in future. Furthermore, all were acutely aware that prostheses '*...had a limited shelf life....*' (GT) of 10 to 15 years but also that as young recipients, with higher activity levels, this duration may be less for them. Most were therefore anticipating at least one or two further hip operations during their lifetime as prostheses wore out.

These concerns were further complicated by participants' perceptions of increased surgical risk as they got older and the greater technical challenges that multiple operations or revisions posed surgically. Participants who had had surgical pins inserted, were aware of the potential for these to become dislodged requiring removal at some point in the future. Future concerns therefore, to some extent, depended upon the original surgery participants had undergone although generally a high level of awareness of future risk prompted a range of concerns for the future in this area.

Individuals however, often balanced these concerns with optimism about the positive impact that future technological advances might offer in reducing these risks. Some compared these concerns with other significant events in their lives such as this individual who had previously had his young child diagnosed with cancer:

‘...there are a lot worst things happen in life...I could potentially have to have [another] hip operation if it all started to drop to bits...not the end of the world...’ (GA)

Avoiding a noticeable limp was a key concern for all participants. Many were still hopeful, even a number of years post injury, of further improvement in mobility, stamina and pain. This appeared to help them manage worries about their ability to work and cope with day to day living in the longer term. One participant was acutely aware that the long term physical limitations predicted post injury meant she would be unable to return to her previous employment and would therefore need to find alternative work. Furthermore, a number of those who had initially recovered well and not anticipated further problems, were now facing new problems such as pain when walking, which required further treatment years later. They often chose to try to manage this with increasing doses of analgesia rather than face further surgery.

Concerns about a future of having to rely on other people for simple day to day activities such as getting on and off a bus, like:

‘...old people...I don’t want to be like one of them...not able to lift my leg up but I’m still moving...still moving my leg...’ (PAS)

were at the forefront of many participants’ minds and formed a recurrent theme in their stories. This concern often stimulated these individuals to restructure their lives. For some this meant moving house to be closer to family and friends and

prevent a potential recurrence of the social isolation experienced post injury. This issue was compounded by the fact that participants were often living away from extended family, working full-time with limited contact with neighbours, or not settled long term in a locale with established support networks in the local community. The injury also prompted some individuals to liquidise assets to cover mortgage and other living costs should they have another accident or complications from the original injury as this example illustrates:

'...so it's...getting myself into a position where I've got support systems ...sister round the corner...financial outgoings are minimal...I've got...something to fall back on...because when I was off [that was] one of the biggest stresses...' (SF)

Such concerns for the future were borne of practical issues participants faced during their initial recovery but were also a result of the accident forcing them to face a potential future reality they had not previously considered. For some individuals this meant creating a living will. For others it stimulated a desire to maximise their current level of fitness which they felt was now time-limited, perhaps to only 5 years, although it was not at all clear where this timescale had originated from.

This sense of an uncertain future prompted fears of not being able to continue in their chosen career as they got older for some participants. This was precipitated by a limited range of movement and strength which had so far persisted for five years or more post injury. This in turn created associated worries about maintaining physical and financial independence or continuing to support a growing family as they aged. The residual physical limitations of the injury meant

that major adaptations to the home were required to enable some individuals to return there. This resulted in significant concern about how to finance these.

Discovering they had a previously un-recognised low bone density i.e. osteopenia or osteoporosis during the injury/recovery period was a key feature of many participant stories. This created further concerns for the future as they tried to balance doing the weight bearing exercise they knew was needed to promote future bone health with the pain and other mobility limitations they were experiencing even a number of years post injury.

For one, previously fit and well participant in her early 30s, discovering she had the spinal bone density of an 80 year old created many fears for the future, particularly as she was also a healthcare professional with some knowledge of the implications of this finding. In addition to dietary changes, she had altered her daily skincare routine and use of sun protection cream specifically as a result of the injury, in an attempt to maximise vitamin D intake and prevent further bone loss. Other participants had taken similar independent action to protect their future bone health. Psychologically, participants reported trying to balance this positive focus and conscious action with putting such concerns to the back of their mind to enable them to effectively get on with day to day life.

Most of the participants who reported fewer concerns about the future had been injured whilst cycling or undertaking other leisure activities. They viewed their accident as: ‘...*just unlucky*...’ (PST), and not likely to happen again. There was

also a tendency for these individuals to be reassured by the presence of the metalwork inserted during surgery. They felt this added strength to the bone structure and could prevent further injury should they be unlucky enough to fall again. Many of the participants exhibiting this type of approach to the future had made a good recovery within four to twelve months of injury, reported little or no pain, particularly when cycling, minimal physical limitations and therefore did not focus on the injury or its impact. They generally reported the experience as not life-changing. Even those individuals who reported no major physical limitations were still concerned about the future however as this 45 year old participant recounts:

'...I've been extremely lucky that I've got one that's not giving me any pain and I've got...100% motion back....but...that feeling grows and grows... especially as you get older that you...don't want to do anything that...puts pressure on something that...might not be repairable again...' (ST)

Others also offered examples of adaptations they had made to avoid discomfort during everyday activities, taking more care with or avoiding some sporting activities and approaching basic household tasks in a different way for fear of causing further injury. This illustrates they too had concerns for the future although these formed a less prominent feature of their stories.

Summary Theme 5: Moving Forward

The findings in this theme provide insight into participant perspectives on: staying active, dealing with residual limitations and their concerns for the future. Overall residual limitations and concerns for the future were very common, often persisting for years post injury. Many individuals had taken a range of actions in response. Participants commonly adopted a positive outlook but spoke of never being the same again and facing a future they had not anticipated. Conversely, a small number of individuals reported little pain and near normal function within two years of injury despite also describing physical symptoms and strategies used to accommodate the injury whilst undertaking everyday activities. This indicates potential residual physical impact that these particular individuals did not define as such. The majority of these participants had fallen during routine sport activities such as cycling and used these activities to support recovery. Their stories also focused more on physical than psychological or social impact.

4.5 Chapter Summary

This chapter has presented the final findings of the study. These were based on cyclical analysis of 30 narrative interviews informed by participants, members of their social networks and the patient critical friend to the study, totalling 25 reviewers. The findings indicate the experience of care was highly variable. There was also evidence of healthcare staff, family and friends having higher expectations of participants in terms of speed of recovery although the impact of the injury on individuals was commonly extensive and long lasting. This encompassed emotional, work, financial and physical impact. Lack of confidence

and fear of falling again were very common and affected many parts of participants' lives including basic every-day living and leisure activities. The unforeseen loss of independence and financial pressures resulting from lost income were also common issues that challenged some participants' self-concept. Impact was not limited to the person injured however, but extended to family, friends and work colleagues.

Thus, the final study outputs indicate that young adults with isolated hip fracture are not a homogeneous group, nor do they fit the widely accepted societal norms for this injury. In addition, their age, mode of injury, clinical presentation and rehabilitation trajectory meant the care pathway for this injury was not always wholly appropriate. There was evidence that participants and others close to them commonly experienced multifaceted and often long-lasting effects as a result of the injury and had continuing concerns for the future, often many years afterwards.

Whilst there were some examples of positive impact these were not widespread. Despite this, a very proactive approach to recovery and positive outlook characterised the participants. This was particularly so for those injured whilst undertaking leisure activities and these individuals also tended to report lesser impact overall. Therefore, for a number of possible reasons, young adults with fragility hip fracture may be relatively invisible to society and as a result, the actual impact of the injury in this group may not be recognised. The implications of these findings will therefore be discussed in the next chapter with reference to the wider literature on the topic.

Stage 4: Working with Silences (Discussion)

4.6 Introduction to the chapter

This final chapter comprises two main sections. The first discusses the findings presented in the previous chapter within the context of the current literature on hip fracture, silences research and the original study aim. This enables the reader to judge the appropriateness of the recommendations presented in section 5.5 for future research, healthcare practice and policy in respect of young people with an isolated hip fracture following a minor fall.

The second part of the chapter addresses the methodological issues arising within the study and researcher reflection on the research process. This includes: matters concerning access and recruitment; how key issues such as patient and public involvement and power influences were addressed; and the unintended consequences of study participation. In addition, new silences identified during the study and how those highlighted at the start have changed or remained the same are also discussed in this section along with researcher reflection on the experience of using The Silences Framework and the constraints within which this young hip fracture study was undertaken.

4.7 Discussion of findings

This section discusses the findings from the young hip fracture study within the context of the original literature review which was subsequently refreshed and further extended in November 2015. Re-running the original search ensured that relevant literature published since 2011 was reviewed. The scope of the original literature review was also extended at this point to include the ASSIA (Applied Social Sciences Index and Abstracts) to ensure appropriate coverage of the social sciences, sociology and psychology literature in health. Additional key word searches/combinations regarding sociological impact, self-concept, identity and social norms, care pathways and post-traumatic stress disorder (PTSD) were also added to the overall search strategy. The rationale for this was that these topics had arisen from the study findings but had not been anticipated at the beginning of the study and were therefore not included in the original search strategy.

This study set out to 'give voice' to patient perspectives on isolated hip fracture in young people as these were mostly missing from the dominant academic, societal and policy discourses concerning this injury. The high response rate indicates young adults with hip fracture were keen to have their injury and recovery stories told, particularly given the extended period since injury for many participants. This verifies the notion of a 'silence' resulting from the previous marginalisation of these voices. As illustrated in Chapter 1, different age parameters have been used in the literature to define young adult in terms of fragility fracture. However all participants in this study were under 60 years of age and half were under 50 at

injury, thus it was successful in recruiting from the target group of young people with experience of fragility fracture and recovery.

The inclusion of both sexes was a further strength of the study as previous research with this young client group has, not surprisingly, focused specifically on women, particularly in light of the increased risk associated with the exponential rise in the incidence of osteoporosis. However, a new potential silence was uncovered during the recruitment process concerning isolated hip fracture resulting from low speed cycling accidents in which no other road user was involved. A number of participants in this study were injured in this way, but would not currently feature in the road accident statistics. Therefore further clarifying the operational definition of 'minor' or 'low velocity' fall to determine eligibility for the study in respect of these individuals prevented further reinforcing the apparent silences which emerged regarding this group as a result of this study.

The findings presented here contradict the currently accepted view that hip fracture in young adults is normally the result of a high velocity injury, but rather supports Verrettas et al (2002) and Al-Ani et al (2013) who question this assumption. For example, half the young hip fracture study participants were injured whilst undertaking normal everyday activities of living. In addition, those injured during leisure activities such as cycling were low velocity injuries, with most participants falling from a standing height whilst either stationary or travelling at a relatively slow speed.

In addition, contrary to most previous research, this study also offers the participant perspective of impact in the much longer term as all were at least nine months and half were more than five years post injury. This included three individuals injured ten years previously. It therefore provides the first long-term exploration of the impact of isolated hip fracture in young adults from the injured person's perspective. The impact of other health conditions developing over time is a valid consideration in long term studies such as this. Although only four participants reported developing other health conditions since the fall, and the impact of these can be difficult to disentangle from that of the hip fracture itself (Bertram et al, 2011), the participants in this study seemed able to clearly differentiate between these. They often gave specific examples to support their view, including the distinctions they experienced between various symptoms.

The findings reported here also challenge the commonly accepted notion that hip fracture recovery in young people is unproblematic. Firstly, whilst relatively speaking this may be true physically, a tenth of participants in this study did require multiple operations and almost a quarter had hip replacement surgery either because initial internal fixation surgery was unsuccessful or not possible. Thus, whilst participants were generally very determined to leave hospital quickly and most had relatively short hospital stays, some had repeated and/or long in-patient experiences. This also had implications for the future which were reported earlier, particularly regarding the need for further surgery as prostheses wore out, the greater risk of surgery with increasing age and technical difficulties associated with revision surgery.

Similarly, the commonly held conception, which was reiterated by some *Collective Voices* reviewers, that young adults with hip fracture recover quickly due to their otherwise good health and social networks, was challenged by the findings presented here. For example, just over a third of participants lived alone and therefore had to relocate or have others do so, often for a number of months, to enable them to fully self-care or cope with basic daily living activities. This was due to the limited mobility and other physical constraints associated with hip fracture recovery. A key feature of the participant stories concerned the impact of the fall on others that extended beyond physical impact to finance and other issues. This reflects similar findings concerning ex-offenders, where this was termed: '*collateral consequences*' (Thomas and Hebenton, 2013). In addition, the high expectations healthcare staff and members of participants' personal networks had in terms of the speed of recovery were often unrealistic, caused emotional distress and had an impact on personal relationships. This finding was specifically verified by the *Collective Voices* review which also highlighted as inappropriate the increased expectations healthcare staff in particular have on young adults with isolated hip fracture in terms of recovery trajectory.

Almost a third of participants had dependents. This is not surprising as all were of working age and working in some capacity, mostly employed full-time or self-employed. The injury and extended recovery period required therefore had a big impact on participants' work and finances as well as their ability to maintain their own physical and financial independence and undertake previous social roles. Such impact was still felt a number of years post injury and featured heavily in their concerns for the future. Thus, in a number of respects, the findings in this

study indicate that young adults with a fragility hip fracture can be characterised quite differently to the commonly accepted hip fracture patient profile as currently represented in the academic literature, healthcare policy and practice.

The findings of the study also indicate that participants' injury and recovery experiences were affected by their 'difference' in terms of what both they and those around them expected. As illustrated in Chapter 1, hip fracture is conceptualised as an injury of old age, caused by high velocity injury and major trauma or as a result of other serious underlying illnesses or lifestyle factors such as smoking and alcohol abuse. However, the findings in this study do not fully support this characterisation.

As outlined in Chapter 4, relative youth, the minor nature of the fall, their presentation post injury and otherwise good general health meant that some participants and many of the people they came into contact with, underestimated the seriousness of the injury and the recovery challenges they faced. This appeared to result in what some participants described as 'reverse ageism' which they experienced in different ways. Examples included a participant forced to move wards late at night because she was young, despite seemingly being the most recently returned from theatre; and others denied access to home loan equipment, bone health assessment and physiotherapy because they were considered too young to need them.

Although limited by self-reporting, many of the participants in this study did not fit the commonly accepted profile for a young hip fracture client in a variety of other ways related to past medical history and lifestyle factors. For example, three individuals were current smokers and only a third overall had ever smoked. In addition, only four reported drinking more alcohol than the recommended limit and a number were teetotal. Whilst exploring the underlying causes of hip fracture in this young adult population was not the aim of this study these are interesting findings. Contrary to much of the literature and associated norms regarding the causes of hip fracture at a young age, only a third of participants reported having previous health conditions that may be associated with increased fracture risk. In addition, only a small number of these were aware before the fall that this put them at increased personal risk of fracture. Almost two thirds reported they were in good health with no knowledge of a medical condition that could increase their risk of fracture, however compromised bone health or other undiagnosed predisposing health conditions were discovered in almost half of the participants following the fall.

The findings of this study therefore refute Chesser et al (2011) but support previous research by Al-Ani et al (2013) who challenged the accepted view that isolated hip fracture in the under 50s was necessarily the result of underlying co-morbidities. The findings do however indicate hidden, compromised physiology in many study participants which neither they nor others were aware of before the fall, and therefore another potential 'silence' regarding fragility hip fracture in young adults.

The findings also support the limited literature available which cautions that the incidence and impact of fragility fracture in young people has previously been significantly underestimated (Boden et al, 1990). This was further reinforced by Karantana et al (2011) who reported that the first significant increase in incidence for women is at 45 years of age, a full five years before routine bone density screening starts in most areas. The significance of the rapidly increasing incidence of osteoporosis and the associated increased risk of fragility hip fracture has been recognised and is driving current research and practice in this area. However, as highlighted above, there is some evidence that routine bone health assessment currently begins too late for many women and the young hip fracture study found evidence that not all young patients are offered this assessment post fracture despite it being recommended (NICE, 2011).

There is also evidence that in some women, normal bone mineral density provides false reassurance regarding bone health and should therefore be supplemented by other metabolic measures to provide a more valid assessment (Oetgen et al, 2009; Aspray, 2013). The findings in this young hip fracture study support this previous research as some participants had normal bone mineral density results either at, or pre-injury. In addition, they also indicate there is a lack of knowledge regarding the best way to treat compromised bone density in pre-menopausal women, particularly when no identifiable underlying cause has been determined. This is a further potential silence concerning this young hip fracture population that this study has exposed.

The findings of this study also indicate that isolated, fragility hip fracture and recovery in young adults has physical, psychological and sociological sequelae affecting the person injured and those around them which often endures for many years. The notion of participants not fitting the expected norms for fragility fracture had a wide ranging impact on their own and others' responses to the injury and their recovery experiences as described in detail in the previous chapter. The impact of the fall on others close to the injured person was discussed in detail in Chapter 4. In particular, the impact on family carers was often substantial. This had not previously been reported in the literature in this client group and may therefore warrant future exploration.

Greater awareness of healthcare staff and the wider public regarding the incidence of fragility hip fracture in young people could have avoided some of the negative experiences participants in this study recounted which appear to have been based on their own and others' underlying assumptions regarding this injury. These included communication difficulties, problems accessing home loan equipment and follow up care such as physiotherapy. The potential inadequacy of widely used Patient Reported Outcome Measures (PROMs) for the young hip fracture population has also been highlighted by this study. Further work to determine suitable person-centred measures for this specific client group might help start to address some of these issues by taking account of the specific needs of young individuals post hip fracture.

Wide variation in the quality of care was experienced by participants in this study. This ranged from '*first-class*' to '*appalling*'. Thus, although good quality care was reported by some individuals this was not consistent either for the same person throughout their recovery or between participants. The reasons for this variation are likely to be multi-faceted as hip fracture patients are not a homogenous group in terms of baseline or outcome characteristics (Eastwood et al, 2002). For example the participants in this study underwent a range of surgical procedures. The severity of pain (Foss et al, 2009; Kondo et al, 2014) and post injury function and quality of life (Coughlin et al, 2016) have been demonstrated to vary by type of surgical procedure which could be one reason why their recovery experiences varied. Similarly researching patient experience of planned hip replacement surgery, which is normally performed to relieve long-term pain and reduced function caused by degenerative disease, is likely to yield different participant views than from patients undergoing internal fixation or hip replacement following a sudden, traumatic injury caused by a minor fall, prior to which they were fit and well, undertaking everyday activities as usual.

With the caveat that some of the participant stories extend a number of years back, these findings indicate that the policy initiatives described in Chapter 1 which seek to ensure high quality care for all, for example (DH, 2001; DH, 2005a; NICE, 2011; Francis, 2013) have yet to come to fruition consistently in practice. Modern hip fracture care is commonly delivered using a care pathway approach. This is one method of organising the care process with the aim of improving patient management (Leigheb et al, 2013). Vanhaecht et al (2012, p2) defines a care pathway as:

‘...a complex intervention for mutual decision making and organisation of predictable care for a well-defined group of pts during a well-defined period.’

It is therefore unsurprising that a care pathway approach to hip fracture care has been widely adopted. As outlined in Chapter 1 this is a serious injury that continues to increase in prevalence and necessitates complex care from a multidisciplinary team. There is however no common definition of a care pathway, which makes comparisons difficult and means they are often confused with the implementation of clinical guidelines and protocols (Leigheb et al, 2013).

Care pathways can have a positive effect on patient outcomes. Pickles et al (2014) used audit to demonstrate a range of improved outcomes including time to surgery and claim there is a wealth of literature on the benefits of evidence based hip fracture care pathways in improving patient outcomes. For example, Flikweert et al (2014) reported a significant decrease in pre-operative fasting time and length of hospital stay associated with the introduction of a new comprehensive care pathway for hip fracture. However, despite being a strong advocate for clinical guidelines, standards and checklists, Parker (2004) questions the extension of these into care pathways as the evidence to date indicates they are unlikely to have substantial impact on clinical outcomes. Furthermore, Vanhaecht et al (2012) argue that the effects of care pathways may vary widely and do not always live up to expectations. This may be partly because assessment of hip fracture outcome, which is currently primarily based on measures such as mortality, may not reveal important improvements in patient outcomes that can be achieved by adopting a

care pathway approach (Leigheb et al, 2013). Care pathways do however offer a means by which the insights gleaned from patient experience can be integrated directly into a standardised care process for broader patient benefit (Schiller et al, 2015).

Nevertheless, both participants and members of the social networks associated with hip fracture care in this study identified that because people in this young client group do not fit the commonly accepted patient profile for fragility, the current hip fracture care pathway does not always suit their needs. This indicates that the very benefits a standardised approach to the implementation of best practice care which a care pathway offers may be limited unless there is enough flexibility to enable the needs of individuals who do not fit expected norms to be accommodated. In other words, the focus on standardisation which a care pathway approach can facilitate, whilst potentially reaping wider benefits, appears to limit the individualised, person-centred care espoused for clients such as young adults with fragility hip fracture who do not fit the current social or professional norms for this injury. As a result, developing more a flexible hip fracture care pathway that recognises the non-homogeneous nature of hip fracture patients could more effectively support the recovery of young clients and help to address some of the issues raised by this study.

The psychological impact of the fall on participants and those around them was multi-faceted and very commonly long term. The psychological impact of hip fracture on patients in the early post injury phase was highlighted by Karlsson et al

(2012) who reported the loss of control and unfamiliar environment which participants described having to come to terms with. The findings in this study support this, particularly in terms of a loss of control which participants sought to regain as soon as possible. This was a key feature of the participant stories and was also validated by the *Collective Voices* review. A prospective study of 40 elderly people by Chung et al (2009) using an interview (5-24 days post fall) plus follow up postal surveys at 12 and 24 weeks reported the presence of Post-Traumatic Stress Disorder (PTSD) in a substantial minority of participants, with 5% exhibiting full chronic PTSD. It also found evidence that PTSD and a fear of falling (FOF) are overlapping concepts and suggested some patients thought to have FOF may be manifesting PTSD. Although adequate measures still have to be validated for this group, the potential scale of this issue is illustrated by a systematic review which found that 50% or more hip fracture patients suffer from FOF which is greatest at a year post injury (Visschedijk et al, 2010).

The young hip fracture study findings strongly support this previous research as a fear of falling was a key part of many participant stories. This had a profound impact not only on the person injured but also those around them. The exceptions to this were some of the cyclist participants who, despite taking more care when cycling, appeared to take the opposite view in concluding that the surgical steel inserted during surgery post injury provided additional protection should they have another fall.

The importance of stable mobility i.e. without experience or fear of falling in allowing people to undertake valued activities was highlighted by Griffiths et al (2015). Perhaps not surprisingly then, despite a fear of falling not having been previously examined prospectively as a determinant of long-term functional recovery post hip fracture, Oude Vashaar et al (2006) found a significant correlation between this and long term functional recovery independent of age and pre-morbid level. Similarly, Visschedijk et al (2010) reported that fear of falling was associated with participants limiting their activities and several negative rehabilitation outcomes such as loss of mobility and higher rates of institutionalisation, mortality and falls.

Fear of falling and the loss of confidence precipitated by this have not been previously studied in young hip fracture patients. However, these issues featured strongly in the participant stories and subsequent findings from this young hip fracture study. As discussed in the previous chapter this affected participants' choice of footwear, basic every-day and leisure activities. It also had an impact on their work which subsequently affected participants' social relationships and engagement. Thus, as discussed in section 4.4.3, a fear of falling and a loss of confidence not only affected the injured person but also those around them who then sought to protect the individual from a further fall. This often resulted in participants engaging in a bargaining process, which involved appeasing the anxieties of others whilst attempting to regain personal independence.

In contrast to the fear of falling exhibited by patients in previous studies, Kondo et al (2014) reported the elderly participants they studied were more concerned about their walking ability. These results confirmed previous findings from Oberg et al (2005) and Olsson et al (2007) who reported a similar concern in their participants that in turn fuelled anxiety about ability to maintain the former lifestyle. Olsson et al (2007) however also noted that this worry was balanced against a strong zest for life and desire to recuperate. The young hip fracture study supports these findings as functionality and getting back to work and other pre-injury activities and responsibilities as quickly as possible was a key finding that was also supported by the *Collective Voices* review. However, participants' concerns for the future, as discussed in section 4.4.5.3 were enduring and multi-faceted, encompassing financial and physical independence, future surgery and work and relationship issues.

Chung et al (2009) found that older people restricted their social activities as a result of a fear of falling. Whilst Kondo et al (2014) noted a reduction in social activities however, this was less of a concern for their participants than the problems they experienced with pain or activities of daily living because the majority of them had retired. Perhaps not surprisingly this was not the case in the study reported here as the young hip fracture study participants were commonly of working age and subject to other responsibilities or social expectations.

A related finding concerned the issue of identity or participants' self-concept. This was commonly challenged by the physical impact of the injury, which limited

personal independence and ability to self-care, often for long periods. It also however, had a psychological impact as individuals came to terms with a different personal future that was associated with unforeseen physical, financial and social limitations. This issue was also connected to the way in which others identified participants after the fall. Whilst there were some positive examples of change, these new identities were predominantly unwelcome and had a negative impact requiring practical and psychological adjustment. Some individuals reported moving through this transition and adjusting circumstances to accommodate these challenges and ensure future security for them and/or their families. Others however likened the process to a bereavement or loss of their former self and appeared to be coming to terms with a new post-injury identity whilst still actively seeking further recovery years later. This is perhaps not surprising given the severe, sudden and traumatic nature of the injury, often whilst undertaking everyday activities. It may therefore warrant further investigation based on the research regarding PTSD in elderly people following fragility fracture discussed earlier.

The physical impact of the hip fracture discussed in Chapter 4 section 4.4.5.2 '*residual limitations*' was wide-ranging and often lasted many years. However, the proactive, future focus of participants, which was verified by *Collective Voices* reviewers, meant that participants generally tried not to focus on this. This was despite experiencing difficulties with everyday activities such as shopping, getting in and out of a car and walking up gradients or stairs. Previous work and leisure activities were commonly adapted to enable coping. Some of the findings suggested however that the way participants dealt with the long term

complications of the injury could inadvertently contribute to their lack of visibility and further marginalisation in society and healthcare practice. For example, individuals often had a relatively short hospital stay and used their residual personal independence and resources to support recovery post discharge, for example by sourcing private physiotherapy. This study found wide variations in the availability of physiotherapy services and difficulties with access. In addition to better levels of provision, it is possible that new models of service delivery, for example evening and weekend appointments or tele-physiotherapy advice could more effectively meet the needs of this young client group, enable access to rehabilitation and help maximise recovery.

Whilst sourcing their own rehabilitation support may purely have been driven by being denied access to care and the widespread rationing of physiotherapy participants reported, it could also be a symptom of their proactive approach to recovery and regaining functionality. For example participants recounted avoiding visiting the GP wherever possible to prevent referral for or discussion about potential hip replacement. Participants also described 'hiding' a recurring limp and actively managing activity levels or adapting activities to cover up residual physical limitations. This potentially compounds the relative invisibility of the enduring impact they experienced, further perpetuating the silences associated with fragility fracture in young people.

Similarly, the majority of participants minimised their use of analgesia by employing non-pharmaceutical pain relieving strategies and tended to buy over the

counter analgesia rather than request a prescription. Participants busy with other responsibilities and priorities such as work or family found this more convenient than accessing a GP. However these factors all serve to reduce the visibility of the needs of this client group within health and wider social systems, the associated academic literature and policy.

These participant-determined factors were further compounded by other issues. For example, one individual noted that the residual pain and discomfort she experiences five years post injury is now only manifest in a limp when she is particularly tired. Thus the continuing impact of the injury on her and her life is generally not visible to others. This is despite attempts by professionals in the field to assess the impact of hip fracture using strategies such as audit. One particularly interesting finding which emerged from the study came from participant comments presented in section 4.4.5.2 on the inability of well-validated and widely used tools for assessing functioning and well-being post hip fracture i.e. the Oxford Hip Score and EQ-5D (Parsons et al, 2014)) to capture the nuances of the complications young people experience.

Furthermore, despite most of the participants falling outside in public places and the opportunity this affords to instigate legal proceedings, only one had done so. The reasons given were varied but this is a further example of how the silences associated with this injury in a relatively young population are further compounded and their relative invisibility in society is preserved as participants are unlikely to raise the issue publicly by pursuing recompense.

4.8 Methodological issues and researcher reflection on the research process

4.8.1 Patient/public involvement and managing power influences

Patient and public involvement in health research is now widely accepted as best practice and is one means of helping to address inherent power imbalances. It can empower and provide the means by which people using healthcare can influence service improvement (Involve, 2012).

The involvement of a young hip fracture patient as a critical friend to the study was a crucial aspect of the research design. Her input throughout in providing advice regarding the research design, recruitment and participant materials, helped the study to remain as close to the participant voice as possible. She also verified the *Initial findings* summary (Appendix 12) based on her own experience of hip fracture and recovery and confirmed that the *Collective Voices* volunteers were from social networks of relevance to a young hip fracture patient. Ideally I would have involved this individual from the initial conception of the study. However, identifying her was a challenging process and was not achieved until after the study design stage. She was fully supportive of the study design however, confirming its overall value from a patient perspective and the appropriateness of using minimally structured interviews. She also confirmed the value of the cyclical data analysis process required by The Silences Framework (Serrant-Green, 2011), particularly the *Collective Voices* stage involving members of participants' social networks.

I approached the relationship with this voluntary, critical friend as a partnership with an individual who was motivated to see healthcare delivery for young adults with hip fracture patients enhanced. We each brought our own perspective and skills however from the start I was very conscious of the need to build rapport without exerting undue influence. Striking a balance between providing information on my background and motivation for undertaking the research, whilst enabling her to give honest feedback on all aspects of the study involved constant reflexivity during and between our meetings. I was potentially in a position of perceived power as the leader of the study and a healthcare professional. This critical friend however also had power arising from her voluntary status, which she could withdraw at any time. I experienced a constant internal reflexivity around treating her as an equal whilst not exploiting her, for example by ensuring meetings were not too frequent and did not last longer than agreed.

Over time we experienced a developing and dynamic relationship as researcher and patient critical friend to the study. This relationship was characterised by the empathy, caring, shared disclosure and respect also described by Colbourne and Sque (2005) when describing the researcher/participant relationship. This working relationship meant I had direct access to an independent patient perspective throughout the study process and enabled a constant participant focus. I found myself repeatedly reflecting on this relationship, our shared understanding of its purpose and finite duration along with how to achieve positive disengagement at the conclusion of the study.

Although there are many challenges in achieving true partnership in these circumstances, this approach extended Edwards (2002) proposal to reconceptualise patients not only as honorary members of the healthcare team, valued for their contribution to their own care, to become honorary members of the research team. Recognising and appropriately managing such power influences within the study was an important consideration, not least because of the criticalist philosophy underpinning it which concerns the relative powerlessness of marginalised or under-represented groups, but also its centrality to the underpinning conceptual framework used to guide the study, The Silences Framework (Serrant-Green, 2011).

Adopting minimally structured interviews as the data collection method maximised participant control of the dialogue and was therefore a further means of minimising the recognised power influences impacting on the study. This approach to interviewing was also designed to communicate to participants the partnership approach I sought. As described in Chapter 3, my casual but tidy dress and use of everyday language, avoiding jargon in the study materials and during interview, were examples of further strategies used to help address some of the inherent power influences in the study. In addition, the data analysis and findings generation phases of the study involved the research participants (*Silence Dialogue*: Stage 2 analysis) and public/service user voices from participant social networks (*Collective Voices*: Stage 3 analysis) which minimised researcher control and supported the rebalancing of power that was initially weighted in favour of the researcher as instigator of the study.

4.8.2 Insider/outsider issues

Positionality in research is a key but contested issue which concerns the status of the researcher in relation to the research. As a result the researcher must account for their characteristics and/or standpoint to enable others to judge the effects of these on the results (Alasuutari et al, 2008). An emic or 'insider' perspective suggests a subjective, informed standpoint or a study in which the researcher is deeply invested (Kahuna, 2000). Throughout the research process I was acutely aware of my position as a healthcare practitioner researcher with personal experience of the injury being investigated and the impact this could have on the study and its findings. This spanned the design, implementation and reporting of the study as well as my relationship with the patient critical friend, the NHS Trust staff who facilitated the completion of the research and the participants themselves. My ultimate aim was to enable an emic or 'insider': '*...explanation of the social world provided by the participant in it*' (Green and Thorogood, 2014, p155) or '*...interpretive rendering from the inside...*' (Charmaz, 2004, p980) of young hip fracture patients' experiences.

The role of the researcher must be critically scrutinised in the same way as the research itself (Arber, 2006) however, particularly for interpretive research using qualitative methods within a still dominant positivist, empirical approach to knowledge creation (Kahuna, 2000). Qualitative research requires a complex relationship between the researcher and the subject, in which the researcher must be aware of their own social identity and place in the research (Serrant-Green,

2002). Being both an insider with knowledge of the study population and an outsider as the researcher presented additional challenges (Kahuna, 2000).

A taxing, practical positionality-related issue that arose was whether or not to disclose my own experience of the injury being studied before each interview. My instinct was to provide this information in the interests of transparency, honesty, professional nursing ethics and as a potential means of building rapport with participants. However, I was also aware this could influence what participants might say or how they approached the interview. I chose instead therefore not to routinely disclose this information but rather to introduce myself using the etic aspects of my positionality as a student researcher who was not an expert in orthopaedics and had not worked at the Trust or in the local area. These 'outsider' characteristics of being unfamiliar with participants' local healthcare services and geographical area prevented one of the difficulties some 'insider' researchers face who know the organisation in which the study is taking place. Asselin (2003) described this as role confusion. I had however developed a strategy for dealing with this should a participant specifically ask about my interest in this topic or past experience of the injury. This only occurred once at the start of an interview however it was very helpful to have thought through this scenario and have a strategy in place. I therefore proposed to answer any questions she had about why I was undertaking the study at the end of the interview to prevent potentially influencing her story. She was then perfectly happy to proceed with the interview and I answered her questions afterwards.

This dilemma specifically arose as a result of my previous experience of the study topic and resulting emic, or insider position as a member of the injury group. This shared previous experience of healthcare was an example of the shared socio-political histories that Kahuna (2000) notes can characterise members of marginalised groups which I as researcher shared with the study participants. It illustrates the dynamic nature of researcher positionality. I chose to adopt a more etic or outsider approach during the interviews to avoid unduly influencing the participants or making potentially incorrect assumptions about what they said because of my prior knowledge of the topic, whilst recognising that it is impossible to 'unknow' my previous experience. This can create what Arber (2006) describes as an 'identity crisis' when insider–outsider identities collide and required the application of: '*...self-conscious criticism...*' (Kincheloe and Maclaren, 2008 p48).

It could be argued that some interviews could have been enhanced by my adopting an overtly emic position, thus providing greater potential for rapport building with participants. However, I chose to rely on my other interpersonal skills to help build rapport whilst minimising any perceived or real influence which adopting an overtly emic position during interview may have stimulated. This further illustrates the dynamic nature of positionality which can vary during any encounter from emic to etic or vice versa. The issue of positionality is arguably a more blurred than dichotomous perspective with clear distinction between the two. Therefore seeking to make the familiar '*...strange...*' (Green and Thorogood, 2014,p158) by researching a group one is part of, can result in tension, incongruities and personal challenges that should be recognised (Arber, 2006; Asselin, 2003).

One such example noted in my research journal, where a participant recounted an experience that could have had a further negative impact on his health, was recorded as particularly uncomfortable. I was very aware of actively remaining in the researcher role to prevent slipping into my familiar public health nurse and behaviour change intervention role. Such challenges are described by Fine (1994) as 'walking the margins' that separate self as researcher from study participants. This was only successfully achieved using internal dialogue during the interview which in turn relied on constant cognitive vigilance and reflexivity to recognise such issues as they arose. Researcher recording of emotions and identities in this way can also help provide a useful audit trail (Arber, 2006) and help manage effective reflexivity (Asselin, 2003).

A supervisor seeking clarification of my use of the word 'patient' in describing my insider perspective, prompted me to reflect on this term. Although it is commonly used to describe an individual who is under active medical supervision or receiving care, I had been neither for a number of years. As a result I began to question my concept of self which the use of this term implied. I concluded that although I had been discharged and not actively treated for some years, I still practised rehabilitation exercises and activities, striving to achieve the post injury functional improvement I had been told by my surgeon to expect. I therefore seemed to have subconsciously defined 'patient' as an individual still independently seeking and/or capable of recovery rather than accepting the common definition of a person undergoing formal medical care. It is possible this was because this would require acceptance of my limited mobility and altered post injury health as the new norm. Although this is only one perspective, the term patient is currently defined by

professionals therefore exploration of this concept from the patient perspective may be warranted. This reflection also illustrates that the altered self-concept or identity of young hip fracture participants in this study as reported in the previous chapter may also be a phenomenon worthy of conscious exploration by researchers adopting an emic approach.

Positionality also concerns how others position the researcher, which may or may not be congruent with the researcher's own perception of positionality. For example, as a healthcare professional/academic and student researcher, colleagues I came into contact with at the study site treated me as an insider, recognising for example my emic experience as a clinician. However, this was somewhat at odds with my own perception as I had no experience of working in this type of unit, speciality, such a large hospital or the geographical area in which it was situated. I was therefore very conscious of these etic perspectives and actually drew on these during some interviews to clarify participants' meaning or when they appeared to assume I had this local or specialist knowledge.

In seeking to remain reflexive throughout and providing a transparent audit trail of the research process, I sought to adopt an etic or outsider perspective when conducting the interviews and data analysis. However, this insider-outsider dichotomy is not as clear as this terminology might suggest. In practice, I experienced the nature of researcher positionality and reflexivity as dynamic and constantly changing, requiring conscious balancing of involvement and detachment throughout the process (Arber, 2006; Kahuna, 2000).

For example, despite actively focused on listening to what participants said and conscious of adopting an interested but neutral stance, I was also at times reflecting on my own experience of similar events. Maintaining conscious reflexivity during the interviews and keeping a record of these experiences, my responses and the potential impact on the study in a reflective diary were strategies used to manage this. I found it difficult to ignore involuntary thoughts about whether or not the participant experiences I was hearing were similar or different to mine, in what way and why. Whilst this perspective could potentially add value, my aim was to focus on participant stories. Thus despite drawing on my 'insider' knowledge as a healthcare practitioner, I was very conscious as a researcher, of avoiding unduly influencing the data collection process, data or its analysis. I did seek however to enter the world of the participants by getting 'inside' their experiences whilst undertaking the data collection, analysis and reporting process. The aim of this was to enhance validity by remaining faithful to participants' priorities (Green and Thorogood, 2014).

A third perspective on positionality is that of the participant. Some participants had dual etic–emic positionality as an injured person receiving care but also with healthcare practitioner or other relevant professional experience. Whilst this issue was not specifically explored in this study, there was some indication from the findings discussed in Chapter 4 that the emic perspective this afforded these participants had influenced some of their responses to the fall and subsequent recovery. Participant positionality may therefore be worthy of further exploration.

4.8.3 Operational definitions

Arriving at valid and robust definitions of 'young' and 'low velocity' falls for the purposes of inclusion/exclusion from the study was not as straightforward as anticipated. As identified in the Chapter 1, a range of different upper age parameters are used in the literature when referring to young adults with hip fracture. Although the minimum of 18 years of age was relatively unproblematic, the upper age range used to define the 'young' or 'elderly' focus of studies was much less so. Some studies only provided age ranges without defining these as 'young' or 'elderly' and vice versa. Most previous studies used 65 years of age as the upper threshold for inclusion/exclusion (Karantana et al, 2011; Holt et al, 2008a; Chung et al, 2009; Ziden et al, 2008) whilst a much smaller number focused on the over 50s (Eastwood et al, 2002; Nieves et al, 2010; Rohde et al, 2008; Verettas et al, 2002). Those specifically using the term 'young' hip fracture included participants aged 12 and 49 years (Swiontowski et al, 1984) and 20-40 years of age (Protzman and Burkhalter, 1976). As a result, in keeping with Verettas et al's (2002) claim that age parameters related to hip fracture research are relatively arbitrary, and based on this study's aim to:

- focus on hip fracture in young individuals
- achieve a realistic target sample, and
- the relatively limited resources available for the study

a pragmatic decision was made to define 'young' as aged 18-60 years at the time of injury for this study.

The review and revision of the original operational definition of 'low velocity' as described in Chapter 2 section 2.5.4 was a key learning point. Two aspects of velocity had been defined, namely height of fall and speed of travel. Whilst the height of fall definition worked well, operationalising speed of travel proved more difficult. The volunteers this criterion concerned were all undertaking leisure activities i.e. cycling, ice-skating or running when they fell and travelling faster than the originally defined 3-4 miles per hour (brisk walking speed). However during screening it was clear these were not high velocity injuries as there were no other injuries incurred, damage to equipment or involvement of other road users for example. Scrutiny of the literature on this specific issue/accident group clearly indicated that cycling accidents of this nature were under-reported and under-researched. This indicated that isolated proximal fracture of the femur in young cyclists following relatively low speed cycling accidents not involving other road users, may be a new silence that had been uncovered as a result of this study. However, it did not address the velocity aspect of the operational definition used to determine inclusion or exclusion of cyclist participants.

Speed of cyclist travel at the time of fall was rarely reported in the literature although a number of studies, such as Stone and Broughton (2003) did look at road speed limit. One exception reported a threshold effect for increased injury severity at 20mph (Kim et al, 2007). Commonly papers defining speed categories did so with specific reference to motor vehicle crashes and vehicle speeds where a low speed impact was defined as between 1-2mph and 20-25mph (Tucker, 1995). One definition of low velocity injury was found. Although this study primarily

concerned children, it defined low velocity injury as that resulting from household trauma and cycling accidents (Wood et al, 2005).

As a result of this further review of the literature the operational definition of speed for this study was revised to a maximum of approximately 15 miles per hour, based on individuals' self-reports of approximate speed of travel at injury. This was well below the 25mph maximum identified by Tucker (1995) to allow for potential underestimating of speed by individuals. This process highlights the complexity of developing robust but valid operational definitions to effectively support inclusion/exclusion decisions and the need for researchers to respond to issues as they emerge within a study (Aull-Davis, 2008). However it also resulted in the apparent discovery, during the recruitment process, of a group of individuals who would not otherwise be represented in the literature and could have been further marginalised and silenced if excluded from this study. This decision was subsequently supported by a leading trauma surgeon at the study site who recognised the gap in the literature identified and also confirmed that as a result, clinical knowledge regarding this particular client group was lacking.

4.8.4 Achieving access

Access emerged as the main issue because the target population was relatively small and with no national database recording these young individuals, could have been difficult to access. However, finding and successfully negotiating access to a robust, regional hip fracture database, which held up to date records of all hip fracture patients, including those under 60 years of age at injury since 1999

(Karantana et al, 2011), provided relatively easy access to the target study population. Nevertheless, not uncommonly for this type of research, it took more than two years from receipt of 'in principle' support for the study and use of the database from the relevant senior clinician to the actual patient information/recruitment packs being distributed. This was partly the result of the time required to secure the appropriate University, NHS Research Ethics Committee and NHS Trust Research and Innovation approvals plus an Honorary Contract and Research Passport from the relevant NHS Trust. These are standard conditions for research with NHS patients, however this process was compounded by difficulty accessing busy clinical and administrative staff who had more urgent priorities, which as Dainty et al (2014) note, can be a challenge.

The research process was further complicated by database coordinator and other NHS Trust staff changes which resulted in my having to develop new relationships with colleagues part-way through the research process. This affected the continuity and timeliness of the approvals processes, confirmation of the study population and the practicalities of participant recruitment. This was despite my fostering effective relationships with new staff and regular follow up via telephone and email. It also occurred despite the study site valuing and being highly active in international orthopaedic trauma research, although the expressed interest and ongoing support of the lead trauma consultant was an important supporting factor that ultimately enabled progress. Furthermore, my living and working over 200 miles from the study site made the practicalities of building and sustaining relationships with new clinical and administrative colleagues and scheduling and completing over 30 interviews at a distance, more of a challenge.

4.8.5 Recruitment process

Recruiting through a Trust colleague/gatekeeper posed its own challenges. Initially it was agreed that invitations to participate would be distributed in batches to enable me, as a part-time research student, to manage the replies in a timely fashion, ensuring volunteers received prompt secondary screening and interview. This would also have enabled transcribing and initial analysis to be undertaken as data collection progressed. However a specific verbal and documented agreement with the individual concerned was ineffective as the study packs were distributed to all 343 eligible individuals at the same time. As a result I received 50 replies in one batch and a further 21 the following week. From a pragmatic perspective, after taking over two years to reach this point, I was just relieved that the invitations to participate had finally been distributed. Dainty et al (2014) reported colleagues' other local work priorities can be a significant barrier to effective recruitment although delayed invitation letter distribution was the only impact in this case.

The distribution of study invitations in one batch however, led to a very intensive period of following up all respondents for secondary screening, arranging and then undertaking interviews. This would not have been the case had the invitations been send out and returned to me in smaller batches as originally planned. Nevertheless, despite creating additional pressure associated with the practicalities of undertaking up to three in-depth interviews a day and prioritising participant convenience whilst working at a distance, the advantage of this situation was that I was fully immersed in the physical and cognitive processes of interviewing, transcribing and analysing the data within a relatively short period of

time. For practical reasons this meant the usual qualitative research process in which each interview is transcribed and analysed to inform subsequent data collection and analysis could not be achieved. It did mean however that, in not having transcribed or analysed previous interviews, I was focused purely on enabling each participant to tell their own story and talk about what was important to them regarding their experiences of this injury and recovery during interview. This was congruent with the study aim of enabling the participants to control the interviews and what was discussed as much as possible.

A further issue arose during the recruitment process. The Trust supporting the study added their normal periodic trauma audit questionnaires (OHS and EQ-5D) to the participant information packs distributed for my study. This caused confusion for some individuals as these questionnaires were not part of my study. They were therefore not mentioned in the participant information letter as I had no knowledge this would be happening. As a result, I received some queries and specific feedback from my participants on the perceived unsuitability of these tools for this young client group. I raised the issue with the Trust contact when it came to light. I was then able to reassure respondents that these questionnaires were a routine part of the local NHS Trust clinical audit practice and although not part of this study I would pass on the feedback I received to the relevant Trust staff.

This issue occurred as the Trust, understandably, sought to maximise value from the expense of contacting people for the purposes of my study. However it resulted in unanticipated feedback during interview regarding the appropriateness

of the PROM/audit tools commonly used as the accepted standard for assessing health outcomes in this client group. For example, two participants indicated they had begun to complete the questionnaires but given up as the questions they contained were not relevant to them. They therefore felt unable to answer effectively within the constraints of the questionnaires to provide a valid description of their post injury ability. Their perceptions were that because of the limited relevance of the questions to their post injury capabilities, completion would not give an accurate picture of their capabilities in terms of day-to-day activities and the variability of enduring symptoms. Another individual was concerned the audit questions all assumed, perhaps unsurprisingly, a pre-injury ability to walk. She therefore felt the tools did not meet her needs as a pre-injury wheelchair user so did not return the questionnaires. One set of completed questionnaires was returned directly to me and I forwarded these on to the NHS Trust audit co-ordinator.

This participant feedback was interesting as the questionnaires concerned (Oxford Hip Score and EQ-5D) are both valid and reliable self-assessment tools, commonly used to assess the impact of hip fracture (See for example: Parsons et al, 2014; Griffiths et al, 2015; Hansson et al, 2015; Al-Ani et al, 2013) and very good correlation is reported between the two (Parsons et al, 2014). However, the Oxford Hip Score was specifically designed to quantify disability caused by degenerative joint disease, not traumatic injury. In addition, the EQ-5D is a generic quality of life measure that is applicable to a wide range of healthcare conditions but is not specific to hip fracture. Although it covers health domains such as mobility and usual activities, self-care, anxiety and pain that hip fracture patients

consider important, Parsons et al (2014) called for more research to determine if EQ-5D could be used to enhance the design and delivery of healthcare for this group.

This information was shared with the Trust hip fracture audit team outside this study however it appeared to indicate that members of this client group could be being unintentionally silenced as a result of the tools routinely used to assess hip fracture outcomes. This was potentially another new silence uncovered as a result of this study, further validating the identification of this patient group as marginalised by inadvertent omission rather than active commission. It also further validated the critical interpretivist approach adopted for this study which provided the opportunity for members of this specific client group to have their voice heard.

A small number of individuals responded to the invitation to participate in the study to say they did not want to join but did want to reinforce the need for it. The reason given for not participating was that they were still too upset to talk about the injury and their recovery. This appears therefore to indicate a further silence in terms of ongoing emotional trauma that remains unchanged at least a year post injury and which appears to have prevented some young people with hip fracture participating in the study. The high response rate and only one 'did not attend' for interview in this study, does however indicate that young adults with hip fracture were keen to have their stories of injury and recovery heard. This further reinforced the need for this study by highlighting the lack of voice these individuals appear to have experienced previously.

4.8.6 Data collection process

The data collection process progressed remarkably uneventfully. Difficulties with practical issues such as interruptions during interviews are common but were not a feature of this study. This may partly be because the accommodation was regularly used for research interviews by the local clinical department. Toward the end of an early interview the digital recording stopped as the memory card was full. As the participant indicated she had nothing more to say I did not start the backup recorder. She then went on to share new information however, so I made copious notes in lieu of recording this final segment of the interview whilst still maintaining active listening and eye contact as much as possible. I subsequently added these notes to her interview transcript. This was an example of the 'small talk' Dainty et al (2014) identify as a relatively common feature of qualitative interviewing which I could have been more aware of. Although I did effectively manage the recording device for subsequent interviews and this situation did not recur, it was a key learning point that had not surfaced during the pilot interview. It is likely this was because the pilot study had not involved multiple interviews undertaken one after the other.

The demarcation between recruitment and data collection was challenged during the secondary screening process to determine inclusion/exclusion of volunteers. During this conversation, volunteers rarely had questions about the study. This could imply the study information pack was effective, however almost started to recount aspects of their injury and recovery story. This reflects the theory that storytelling is a natural part of everyday human life, however I was acutely aware

these conversations were not part of the formal data collection process. I had not sought formal consent at this point although volunteers had had sight of the consent form which was part of the study information pack. I was also concerned that whilst this information was very relevant to the study, it could be lost, as having already shared it with me in this context, they may not repeat it during interview.

I later reflected on whether this situation arose because of something about the way in which I had conducted the secondary screening process. This is however a relatively common phenomenon that was explored by Dainty et al (2014) and is referred to as 'small talk' by some authors. It could therefore be a symptom of my relative inexperience as a researcher, although such occurrences are more commonly reported in relation to immediate post interview dialogue. As I found it difficult, and felt it inappropriate anyway to stop individuals starting to tell their story during the secondary screening process, I began making very brief notes of what they said as I sensed it was important to them. Having identified this issue, I also considered audio-recording the screening process conversation but this was outside the ethical approvals for the study.

This experience may indicate that the individuals were very keen to share their stories of injury and recovery but ultimately the secondary screening process proved an important part of building rapport and their trust in me as an unknown researcher. I shared with them that I was making brief notes of what they were saying during the initial screening process which no-one objected to and the notes

were very useful in helping maintain a clear picture of each participant as an individual and the circumstances of their fall. When necessary I summarised these notes verbally during the early part of the actual interviews to enable participants to begin describing their experiences. These brief, impromptu notes therefore became a key research resource.

Despite having some previous experience of qualitative interviewing and many years experience as a nurse, the emotional labour of conducting the interviews was greater than expected. This was fuelled by a number of factors. The first concerned actively maintaining a reflexive cognitive stance within the changing context of a 'live' interview. This involved for example simultaneously maintaining an awareness of and managing:

- building and maintaining rapport
- the environment – including for example issues such as extraneous noise, continued privacy, effective functioning of the recording equipment and time-keeping
- researcher reflexivity – for example, to avoid inadvertently leading or making assumptions regarding participant comments.

I was very cognisant of the potential for the interview to surface painful emotions for participants and had put in place strategies to manage this appropriately should it occur. I had not anticipated however the range of highly traumatic issues participants would share. These may not initially seem of direct relevance to the hip fracture, for example:

- incarceration following an illegitimate pregnancy and ongoing discrimination and enduring mental health issues as a result
- coping with a recent personal diagnosis of lung cancer
- coping with a child's cancer diagnosis and treatment
- suicidal thoughts following an extended period of abuse by a neighbour
- a husband's recent suicide.

Participants however, raised and discussed these experiences in relation to their impact on the fall and/or recovery process. With hindsight this is not surprising as this phenomena has been reported in the literature as associated with interpretive, qualitative approaches (Biggerstaff and Thompson, 2008) such as the minimally structured nature of the interviews and high degree of control this afforded participants. It does however clearly demonstrate the holistic view of health and illness adopted by participants and wider influences on the injury and recovery experiences they considered important.

This experience reinforces the need for researchers, particularly those undertaking qualitative research using minimally structured or open-ended data collection methods, to be particularly mindful of this issue. I found myself reflecting after each interview that to effectively deal with such disclosure I had drawn significantly on transferable skills developed when dealing with difficult topics during my professional experience as a nurse. These skills included communicating empathically whilst maintaining appropriate psychological distance, managing my verbal and non-verbal behaviour and emotions. This is not an uncommon situation

for healthcare practitioner researchers although a clear boundary had to be maintained in providing appropriate support as a researcher without stepping into a nursing advocacy or counselling role (Biggerstaff and Thompson, 2008). It also demonstrates the practicalities of balancing involvement and detachment or 'marginal positioning' (Arber 2006; Fine, 1994) in the research process.

Whilst cognisant of these boundaries, I believe using my transferable skills enabled me to provide a supportive but open environment in which participants were able to share what they thought was important. At times I was just about to offer a participant the opportunity to stop the interview or take a break, gauging the appropriateness of my responses on their non-verbal cues such as eye contact (Kline, 1999), when they spontaneously collected themselves and carried on. On other occasions I did offer to take a break or stop the interview however in all cases participants declined this and carried on to its conclusion. This indicates these individuals thought sharing these aspects of their experience was important even when it was painful for them and researchers undertaking such studies need to be well equipped to effectively support them in this.

Using in-interview summaries and participant verification of researcher understanding of the discussion worked very well. In addition to these benefits, I became aware very early on in the data collection process that these summaries provided welcome respite for participants. It enabled them to collect their thoughts and determine where next to direct the interview or sometimes to go back and expand on what they had already shared. In common with the pilot interviewee

and despite the information in the Participant Information Sheet and reinforcement of the participant led nature of the interview before beginning, most participants expected a structured, researcher-led interview. Thus, effectively 'giving away' power to participants was not as easy as might initially be imagined. A number of factors led me, perhaps naively to expect that enabling the participant to take control of the conversation would be less challenging than it actually was. These included the excellent response rate and apparent eagerness of participants to participate in the study; their spontaneous sharing of their injury experience during the secondary screening process; and the literature I had read which suggested that stories appear so often in everyday life and narratives are a:

'...natural cognitive and linguistic form through which individuals attempt to organise and express meaning and knowledge.' (Brinkmann and Kvale, 2015, p179).

Storytelling as something that comes naturally however was not initially the case for all participants. These stories were being told to a stranger (the researcher) in the specific context of a research study and not as a general part of everyday life which can create challenges for both participant and researcher (Flick, 2015). Participants' understanding and perhaps previous experience of research as the researcher in control, seeking only specific, pre-determined information from them as participants by asking a range of questions to which they responded may have contributed to this. It may also have been the result of a reluctance to share irrelevant information or waste my time that appeared to negate storytelling theory, the information previously provided in the Participant Information Sheet and my re-

emphasising the open nature of the interview during the secondary screening process.

This was a key learning point from the pilot interview however and in subsequent telephone and face-to-face interviews I was more prepared for this type of initial response. I more actively reiterated at the start of the interview my aim to listen to their story and whatever they wanted to share as important to them regarding their injury and recovery experience, rather than ask multiple questions like a survey or structured interview. I also re-iterated my aim to enable them to control the conversation as I was interested in what they considered to be the most important aspects of their injury and recovery experience.

In addition, I began subsequent interviews with a brief summary of the initial information participants provided during the screening process such as how and when they had fallen. This approach seemed to provide a starting point which very effectively put participants at ease and enabled them to begin speaking freely about their experiences. In hindsight, this strategy may have led participants into a chronological approach to telling their stories although some individuals continued on from that point in time whilst others first went back to highlight relevant parts of their story from before the fall. Nevertheless, this strategy was much more effective in enabling participants to begin telling of their experiences than the pilot interview had been.

Constant researcher reflexivity was required to prevent incorrect assumptions being made. For example, many participants had apparently very vivid, detailed memories of the fall however it would have been unsafe to assume the reasons for this as illustrated by this interaction:

VJJ: it happened on 27th May 2007

GJ: wow [pause] specific date

VJJ: [laughs] I have a letter from the...hospital in front of me.

The assumption underlying my surprised response in the example above was that the participant was specific about the date, even seven years later, because the injury had had a major impact on her. However, as Charmaz (2004) notes: ‘...to learn participant meanings we must be reflexive about our own...’ (p982). This is an example of a situation that could have led to an incorrect, taken-for-granted assumption (Asselin, 2003) potentially limiting further probing, as the researcher assumes they know what is meant (Kahuna, 2000). Fortunately the tone of my response immediately prompted clarification by the participant, which corrected my unspoken assumption. This example illustrates the constant vigilance researchers undertaking interpretive research need to maintain. It also demonstrates how my less detached engagement with what the participant was saying led to a less guarded response, allowing the surprise I experienced to be recognised and positively used by the participant to ensure my correct understanding of her meaning.

A further challenge was the presence of a third party during one interview. Although participants had the opportunity to bring a relative or friend along none did and I had not envisaged three-way interviews, as in couples' studies for example, would be undertaken. The exception however was a quadriplegic participant who was accompanied by her Personal Assistant (PA) to help with her physical needs during the interview. At one point the participant sought input from the PA and for a short time her interview became a conversation between them. This helped the participant clarify her thoughts and gave her new insight into the physical impact of the injury but was an unanticipated aspect of data collection that was managed in the moment (Aull-Davies, 2008). I believe I adopted an appropriate stance of taking my lead from the participant who directed the interview in that way as it demonstrated she had taken control of the interview, as was the intention of the data collection process. I was aware however of acting as an observer of the interaction between the two of them as well as an 'interviewer' at this time. Had other participants taken up the invitation to have a relative or friend present during the interview this may have been a more common occurrence and is worth specific consideration by researchers not formally undertaking 'couples' research.

In summary therefore, narrative, or minimally structured interviews were congruent with the aim and philosophy of this study. They also reflect the key principles of ethical research such as beneficence, non-maleficence and respect for autonomy (Greenfield and Jensen, 2010) despite posing significant practical and professional challenges for the researcher. Perhaps most important of these is researcher reflexivity which was a constant priority to simultaneously enable authentic

partnership with participants and a robust research process in which the researcher was the primary listener (Serrant-Green, 2011) and data collection conduit.

4.8.7 Data analysis process

In keeping with The Silences Framework (2011), the active role of the researcher in thematic data analysis (Braun and Clarke, 2006) and way in which this involvement shapes the analysis (Charmaz, 2004), I acknowledge that the data analysis process was influenced by my previous knowledge and experience as a healthcare practitioner with personal experience of the injury under investigation. Cognisant that data analysis presents ethical issues as the researcher brings their epistemological and ontological assumptions to the process (Mauthner et al, 2002), I was mindful of remaining reflexive throughout and thus true to the data, whilst recognising the potential impact of my own prior knowledge and expectations on the analysis (Kincheloe and McLaren, 2008).

One means of managing this was to maintain a data driven and inductive approach. However, this required moving backwards and forwards between inductive and deductive thinking as I consciously tested emerging codes and categories against the original data and between participants (Flick, 2015). Data analysis is a complex undertaking and therefore it may be too simplistic to argue that it is wholly inductive or deductive but more a continuum I moved along at different times in the process to enable the data analysis to progress whilst maintaining a reflexive stance.

Undertaking the *Collective Voices* and *Silence Dialogue* reviews via email or post had the advantage of enabling busy volunteers to review the *draft study findings* at their own convenience and by their chosen method. The main disadvantage was that because this process was undertaken as a one-off review at a distance, it was not possible to follow up on any comments that were unclear. For example, the healthcare professional reviewers mostly completed the review by handwriting comments on the *draft 1 findings / Collective Voices* summary (see Appendix 14) and in some cases it was difficult to determine if they agreed or disagreed with each of the individual theme summaries. Where this was the case the content of the comment was used as a guide and a pragmatic decision made on this basis. An example of this can be found in Appendix 20. This was less of an issue with the *Silence Dialogue* reviewer comments however the design of the study findings summary review proforma could be improved for future studies to enhance clarity and understanding.

I developed and used a range of new skills to enable effective implementation of the study design and overall research process. These included using the online Integrated Research Application System (IRAS) and navigating the National Research Ethics Service (NRES) processes to secure ethical approval for the study. These were new experiences but were completed relatively smoothly. In addition, developing new skills in securely and efficiently managing a large data set were crucial for enabling successful completion. Using a software package (NVIVO 10) to support data management and analysis was daunting and time consuming initially but ultimately worthwhile. The use of this type of software for these purposes is common and as suggested by Seale (2013), I found it helped

immensely with detailed coding, collating and organising coded text and searching for patterns, themes and negative cases. This enabled me to focus more of my attention on the data and its interpretation.

Whilst transcribing interviews, checking the accuracy of those transcribed by others and coding the data, I was aware of a sense of reliving the interviews. In listening to the recordings or reading the transcripts I could picture the participants and the context in which I had interviewed them. This included place, time of day, their appearance or other factors, such as a dog or young child in the background for specific telephone interviews. I was also aware of involuntarily experiencing some of the emotions I had had during interview whilst listening to the participant stories. I believe this demonstrates immersion in the data which enabled me to stay as close to the stories and participant meaning as possible.

The results of the *Silence Dialogue* and *Collective Voices* processes in particular provided reassurance regarding the effectiveness of the study design, implementation and my attempts to truly reflect participant views in reporting the findings. Whilst I was hopeful that the in-interview summaries would help ensure the findings truly reflected what participants said, the *Collective Voices* reviewers were a totally different prospect. There was little of relevance in the literature and I had had no engagement with members of these social groups to be able to gauge what their views might be concerning the study findings. However, they offered surprisingly consistent verification of the findings summaries overall and often volunteered additional information to support their views. I was surprised at the

high level of consistency across and between the groups given the variety of perspectives they represented and the strength of support they provided for the findings.

The additional information provided by these reviewers often corresponded with the detailed findings outlined in Chapter 4 from which the findings summaries were derived. There were no major surprises, which further enhanced my confidence in the robustness of the data analysis, the study design overall and its current relevance, as well as identifying potential areas for further research and enhanced service provision. Where there was some variety in *Collective Voices* responses, for example regarding the social networks and support available for young adults with hip fracture, this matched the variation in participant stories, providing further confirmation of the findings.

In reading the *Collective Voices* reviews, the fragmented nature of healthcare professional experience within the overall hip fracture patient journey became apparent. For example, a paramedic could only comment on pre-hospital care and some acute care nurses and doctors were unable to comment on post-acute care or patient experience. Whilst this may be understandable in a highly complex care pathway spanning a range of clinical specialisms, it may also help explain some of the findings, for example regarding poor communication, continuity of care and unrealistic staff expectations. This suggests further work is needed to ensure staff have a greater awareness of the entire patient journey regardless of their specific

part in the care pathway. This is particularly important at points where patients transit from one part of the service to another.

4.8.8 Unintended consequences from the study

The majority of the thirty participants identified personal therapeutic impact from taking part in the study. This was in two main areas: helping others in a similar position and gaining new insights on their own injury and recovery. Initially this data was coded as a sub-theme of the '*Impact on self*' theme but was later judged to be more an unintended outcome of the study methodology. Participant comments indicating the desire to help others learn from their own experience were initially interpreted more as an expressed aim or motivation for participating in the study than an effect of involvement. There was however a sense that participants had used the study as a vehicle to enable them to achieve this personal aim.

New insights realised by participants as a result of personal reflection on their injury and recovery which participation in the study had stimulated were a key feature of the stories. This reflection was wide-ranging and led to new insights on their psychological and physical recovery for them. For some, recounting their experiences in interview had provided a new perspective on the physical changes resulting from the injury. These included residual physical symptoms not previously considered, recognising a new post injury approach when descending stairs and other physical issues such as their choice of footwear and where they would walk, which participants had not consciously been aware of before.

Recounting her story also prompted one participant and her personal assistant (PA) to reflect together on how the fall had been associated with a worsening of her disability. A range of factors appear to have prevented participants' consideration of some of these issues previously. These included a positive approach to life generally, a sense of having been extremely lucky, and lesser impact of the fracture compared to other traumatic life experiences or illnesses they had encountered. This reflects the generally positive, proactive approach to recovery that was discussed in the Theme 2 findings outlined in Chapter 4, which may have prevented personal reflection on the injury and recovery prior to participating in the study.

There were also individuals who checked the information they were sharing was of relevance to the study. For example, despite the Participant Information Sheet emphasising that the interviews would be participant led with content determined by them, some participants needed reassurance they could share more than the physical/NHS parts of their story, positive as well as negative experiences of recovery and were not wasting the researcher's time by doing so. These assumptions could have been due to the number of high profile NHS failures and public inquiries such as Francis (2013) in the press at the time. Nevertheless they shed interesting light on their, and potentially the wider public's perceptions, of research. This was perhaps based on previous experience or perceived norms of research and recent media coverage of poor NHS care. These assumptions could have resulted in participants excluding themselves from the study or self-censoring what they shared in their stories. This would have inadvertently perpetuated the very silences regarding the experiences, good and poor alike, of young people

with hip fracture that the study sought to address. The issue of individuals remaining silent in response to the real or assumed reaction of others was also highlighted as participants recounted not being able to talk to others about their feelings and the ongoing impact of the injury as they were perceived as having recovered.

This illustrates the most striking impact of participation in the study on individuals, which seems to have been the therapeutic psychological effect. It appears this arose mainly because the interview provided a valid opportunity for individuals to tell their story in a safe environment that was not otherwise available to them. In doing so, it enabled participants to come to terms with the whole experience, some likening participation to seeing a therapist and realising where their paranoia of slipping stemmed from, having not previously had an opportunity to stop and think about it.

The potential for storytelling or minimally structured interviews to enable individuals to make sense of traumatic experiences or difficult life transitions was recognised in Chapter 2 section 2.4 when discussing the justification for this data collection method. There is evidence from the young hip fracture study therefore which further supports the notion that participating in research using minimally structured interviews can have a therapeutic effect for participants. This positive outcome for participants is in keeping with the criticalist philosophy underpinning the study which recognises the contextual nature of knowledge and inquiry and seeks to empower participants and support change.

4.8.9 Critique of The Silences Framework

Overall The Silences Framework (Serrant-Green, 2011) provided a very appropriate guide for the young hip fracture study. As well as preventing further silencing participants as a result of the research process, cyclical data analysis which includes the *Silence Dialogue* and *Collective Voices* processes, is also a very effective strategy. This is particularly so for enabling single-handed researchers to enhance the trustworthiness of a study which would traditionally be achieved by using other researchers i.e. independent analysis of data then comparison.

The Silences Framework (Serrant-Green, 2011) clearly articulates the concept of marginalisation and the young hip fracture study has illustrated it is wholly appropriate for supporting research with marginalised individuals and groups for which it was designed. This may in itself however be a constraining factor in its more widespread use. Current norms regarding the conceptualisation of this issue are associated with marginalisation by commission, for example on the basis of gender, class, sexuality or ethnicity. Individuals and groups, such as young adults with fragility hip fracture however, may also become marginalised as a result of omission. Highlighting this different and rarely identified or discussed means of marginalisation may help researchers working with groups or topics not normally associated with marginalisation but for whom The Framework could be a useful tool, to recognise its relevance. This could increase its use to guide research on issues or with such groups and support the further development of silences research in these areas.

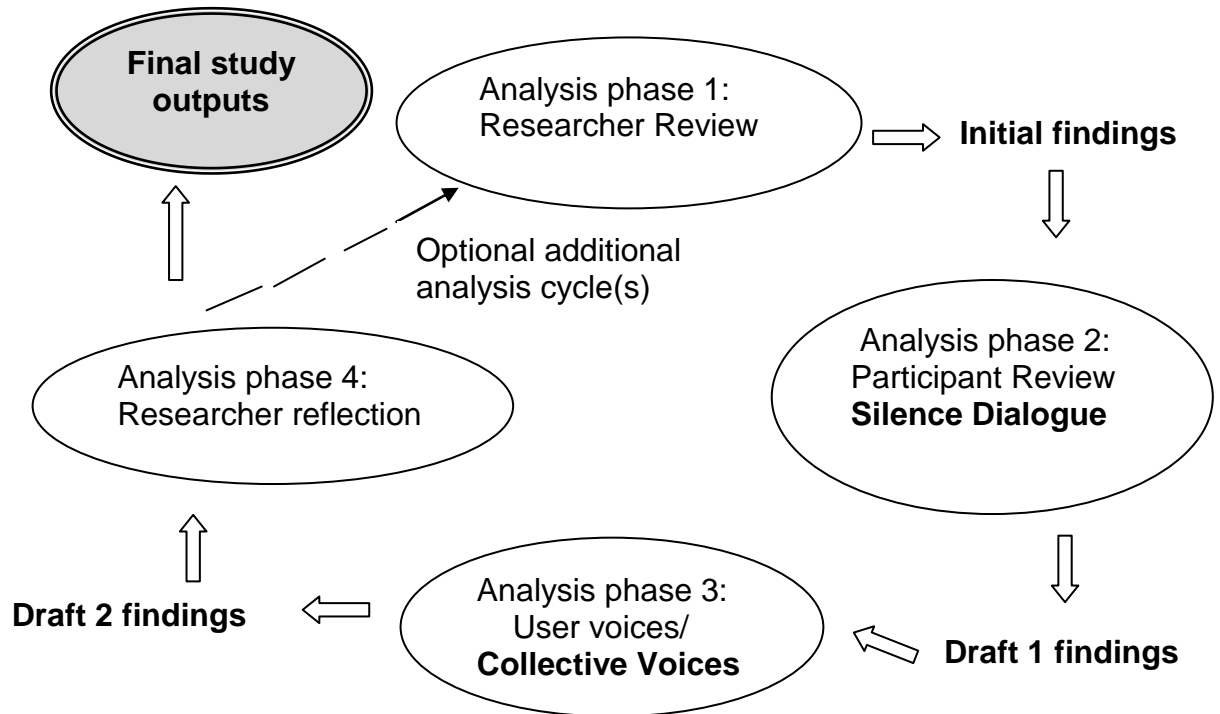
The Silences Framework (Serrant-Green, 2011) offers the researcher an excellent degree of flexibility within a structured but clearly defined research process. This means it is potentially applicable in a wide variety of contexts. On initial inspection it resembles the nursing process and may therefore be of particular interest to nurses. However this high degree of flexibility may not offer, and indeed is not designed to provide, the degree of structure some new researchers may seek. The flexibility The Framework offers in terms of its ability to support a wide range of research designs, methods and data analysis means it offers a clear theoretical underpinning for studies without the need to overlay other research methodologies on top. Greater awareness of this will develop as The Framework is more widely used and reported on by different researchers in different contexts. In the interim however some explicit exploration of this issue within The Framework itself would support others, especially new researchers, in its application.

Although on initial inspection, The Silences Framework (Serrant-Green, 2011) appears very straightforward it took me, as a new researcher, some time to become familiar with and clear about the different stages (1-5), phases (1-4), type of findings (*initial findings, draft 1 findings, draft 2 findings and final study outputs*), how these fit together and the best way to report a study guided by it. This certainly improved as application of The Framework to guide the young hip fracture study progressed and resulted in greater familiarity with it. However, this process was further compounded in this study by the use of a six stage thematic analysis framework that was applied within The Silences Framework (Serrant-Green, 2011) four phase data analysis cycle.

To support my thinking and achieve the clarity I needed I developed an adaptation of the visual representation and labelling of the cyclical data analysis process provided in Serrant-Green (2011). Figure 5 presents this adaptation, which is offered for the potential benefit of other researchers who are unfamiliar with this new research tool. This revised depiction appears more complicated than the original but makes visible each distinct step in the cyclical analysis, separating the analysis processes from the type of findings produced at each point. It also indicates clearly where the *Silence Dialogue* and *Collective Voices* processes occur in relation to the development of the *initial*, *draft 1* and *draft 2 findings* and *final study outputs*. Whilst this information is clearly articulated in the narrative of Serrant-Green (2011) this revised visual depiction of the analysis process may help researchers to more easily become familiar with and therefore more confident when using The Framework for the first time.

In using The Silences Framework (Serrant-Green, 2011) for the first time I initially struggled to determine an appropriate structure in which to present the findings. Seeking to maximise transparency I initially drafted detailed findings at each stage of the analysis cycle i.e. *initial findings*, *draft 1 findings* etc. Whilst it became clear this was not effective and created a lot of repetition, I was unable to ascertain why. This was possibly because The Silences Framework (Serrant-Green, 2011) makes the iterative stages of a thematic analysis approach to data analysis much more explicit. It does this by involving study participants and members of their social networks in specific, identified stages of the data analysis cycle. However, despite being more explicit, these stages represent the normal iterative process of theme development undertaken in any thematic analysis, each individual element of

FIGURE 5: The Silences Framework four phase data analysis cycle adapted from Serrant-Green (2011)



which is not specifically reported in detail under normally accepted research conventions. This is a possible difficulty other new researchers using The Silences Framework (Serrant-Green, 2011) for the first time could also encounter, particularly if using only one type of data. With hindsight this is obvious, may just be an issue specific to my use of this new research tool and can easily be resolved or prevented with more experience of its use. This potential difficulty for new researchers using The Silences Framework (Serrant-Green, 2011) for the first time however, may be prevented by more explicit clarification of this in The Framework itself.

It is also important for researchers using this new research tool to note that the *Collective Voices* process and recruitment of volunteer reviewers forms part of the data analysis rather than the data collection process and articulate this from the start. This can be easily addressed by providing an outline of how it will be managed, for example in terms of recruiting *Collective Voices* volunteers and capturing their review comments on the findings, into the initial ethical and research and innovation approval documentation. Although it can be difficult to identify the final composition of this group at the start of a study as the social networks they will be drawn from are determined by study participants during the data collection stage, it is often possible to give some indication. Building this in from the start can prevent a delay to this part of the data analysis process whilst subsequent ethical and research and innovation approval is sought for a study amendment part way through the study as was the case here (see Appendix 21).

Researchers using The Silences Framework (Serrant-Green, 2011) for the first time are therefore encouraged to be mindful of this issue during the initial planning of a study. They may also need to explain this distinction to colleagues not familiar with using this research framework. My NHS colleague at the study site, an experienced research assistant in that department, kept referring to the *Collective Voices* reviewer feedback on the *draft 1 findings* proforma as 'interviews'. Her use of the term interview implied data collection not analysis, illustrating the potential for confusion the *Collective Voices review* may cause.

4.8.10 Study constraints

Involving participants from just one NHS major trauma centre in England was a notable constraint of the young hip fracture study. The scope of the research was determined for pragmatic reasons in that this Trust database offered access to robust, well-validated information on the target study population which was not available for other areas or nationally. As a result this information was used to confirm the feasibility of the study, inform the final design and sampling and recruitment strategies. This clinical database was therefore a key resource that provided the potential to effectively identify individuals meeting the study criteria and support recruitment. Finding and gaining access to it also effectively scoped the research to within one NHS Trust and geographical area. This also helped make the study achievable for a part-time, student researcher with limited resources. As Silverman (2013) argues, this is a practical contingency faced by many researchers.

The exclusion of patients treated non-surgically, although very small in number, is a further constraint. This exclusion was appropriate however as the focus of this study was on the surgical rehabilitation experience. Potential participants taking Bisphosphonate medication at the time of injury were also excluded. This medication was used as a proxy for previously diagnosed osteoporosis which, although putting those individuals at greater risk of fragility fracture, has been extensively researched. Excluding these two groups may have further compounded any silences regarding their experiences of this injury and recovery.

The data collection method used relied on participant willingness to report and memory. There were absolutely no issues recruiting the target study sample with many more volunteers than required and only one person arranged an interview then did not attend. This indicates members of the target group were keen to share and have their stories of injury and recovery heard. Strategies were employed to build rapport with participants to encourage reporting. The generally rich quality of the resulting interview data, including disclosure of very personal traumatic experiences, indicates this was successfully achieved. Olsson et al (2007) support this finding reporting that participants in their phenomenological study of patient perceptions of rehabilitation post hip fracture talked freely and appeared grateful for having someone to listen to their reflections.

The risk of inaccuracy in the memories on which participants based their accounts however is an important consideration as all were interviewed at least nine months and approximately half five years or more post injury. This issue was discussed with peers and professional researchers when presenting the initial study findings at two international research conferences (Janes, 2014; Janes, 2015). Whilst this is a potential limitation, I concluded it was a risk with any study of this nature. A number of participants recounted vivid memories and a lot of specific detail in their stories, some stating that the passage of time had not dimmed such traumatic and unusual memories. This finding is supported by investigations of memory for real-life events which have repeatedly confirmed that detailed information associated with traumatic or high-arousal events is very well retained and even increases over time (Brewin, 2001). Nevertheless, memory is a complex issue and the potential

effect of this on participant recollections of their experiences needs to be acknowledged.

This study aimed to 'give voice' to young adults with isolated hip fracture. Huberman and Miles (2002) however argue that whilst others can hear, record and interpret their voices, we cannot 'give voice' to others. Strategies such as in-interview member checking, the patient critical friend to the study and the *Silence Dialogue* stage of data analysis were all designed to give precedence to the participant 'voice' and enhance the trustworthiness of the study. The *Collective Voices* process also provided a key opportunity for others from relevant social networks to have their voice heard. Whilst this was achieved, these voices were limited to healthcare staff and relatives/carers. *Collective Voices* from other groups featuring in the participant stories as key to their injury experience and recovery were not accessed. These include retail staff, GPs, public transport staff, pharmacists, spouses/partners of young hip fracture patients, friends, work colleagues and employers. These voices could therefore provide additional perspectives to inform the body of knowledge on this topic in future studies.

A further constraint may be the 'survey' nature of the *Silence Dialogue* and *Collective Voices* reviews. This meant there was no opportunity for either reviewers or the researcher to clarify what was being sought or the resulting feedback although this is a commonly accepted criticism of survey methods. Despite no queries emerging via the NHS Trust staff collecting the reviewer comments on my behalf, it was not always clear from the *Collective Voices* written feedback if reviewers were agreeing with the statements presented and

elaborating on their answer or not. Plenty of additional information was provided on the proforma by reviewers however and how this was dealt with has already been discussed.

Finally, as only one method of data collection was used, the young hip fracture study does not demonstrate method triangulation. However the range of other strategies, as outlined in Chapter 3 section 3.4 such as:

- periodic in-interview summaries as a means of member-checking
- transparent interviewing, transcribing and data analysis procedures
- a structured approach to data analysis (based on Braun and Clarke, 2006)
- cyclical data analysis, including the *Silence Dialogue* and *Collective Voices* processes
- staying as close as possible to the language and terminology used by participants in analysing and reporting the study findings
- the use of 'thick description' in reporting the study
- providing a transparent audit trail and making study documentation available
- seeking out negative cases in the data
- demonstrating researcher reflexivity throughout

were successfully carried out as recommended by Lincoln and Guba (1985) to ensure the trustworthiness of the study overall, thus mitigating this constraint.

4.9 Silences remaining unchanged and new silences identified

Some of the silences identified or remaining unchanged as a result of the young hip fracture study have already been discussed. These include the current gap in the literature regarding isolated hip fracture following low velocity cycling accidents, particularly where there is no involvement of other road users, and ways in which young adults with hip fracture contribute to their own invisibility in society and subsequent marginalisation.

A further potential silence unearthed during the recruitment process but not addressed by this study is that the voices of young hip fracture patients with enduring emotional trauma, a year or more post injury are still unheard. This study found some evidence their ongoing distress may prevent them participating in research designed to give them a voice. For example, one individual telephoned me to say that although she was keen to support the study because these stories needed to be told, she did not want to be interviewed because she found it too upsetting to discuss her experiences. I offered this individual information on the support available locally. This experience early in the recruitment process reinforced the potential value of the study's contribution to the body of knowledge in this area by enabling at least some members of this client group to 'have a voice'. It also indicated however that other young hip fracture patients may be remaining silent as a means of managing the ongoing trauma of the experience as this person had indicated. This is despite being given the

opportunity to be heard, for example, through this study and potentially further compounds the silences surrounding fragility hip fracture in young people.

A further means by which young adults with fragility hip fracture may remain silenced is related to the lack of hip fracture specific PROMs for assessing treatment and rehabilitation outcomes. The young hip fracture study uncovered this potential silence opportunistically, as discussed in the earlier section when routine hip fracture audit data was sought by the sponsoring NHS Trust alongside the invitation to participant in this study. As a result, it appears some individuals may remain silenced by not responding to surveys employing accepted and commonly used PROMs such as The Oxford Hip Score and EQ-5D. These were perceived by some participants in the young hip fracture study as irrelevant because they were unable to capture a true reflection of the impact of the injury in young people. Whilst this issue was raised with relevant NHS Trust partners and it reinforces the appropriateness of the young hip fracture study design, it has not been addressed. An additional silence regarding the appropriateness of the current hip fracture care pathway for young adults with fragility hip fracture who do not fit the accepted social or clinical norm for this injury was also identified and discussed earlier but has not been addressed by this study.

In addition, this study identified a potential silence regarding the treatment of low bone density in pre-menopausal women. This is despite increasing recognition of the importance of bone density, and to some extent its relevance at a younger age than is currently the accepted norm. There still appears however, to be a gap in

the literature on this issue and as one participant in this study experienced, in clinical practice, regarding how best to treat individuals in this situation. At age 33, this participant's experience of being told she would be reviewed again after a pregnancy or the menopause does not appear adequate in a modern, advanced healthcare system. However the treatment of pre-menopausal women with idiopathic low bone mineral density remains unchanged as a result of this study.

Despite relevant legislation and other policies, the findings from this young hip fracture study indicate that individuals with a disability prior to the fall still appear to be unheard. This is despite trying to articulate or have their needs met whilst in hospital and during transfer to and from this environment. This issue may partly be because their actual needs are not congruent with healthcare staff expectations but it is a further potential silence that is unchanged as a result of this study. This may be related to the silence regarding limited staff knowledge of the entire patient journey that emerged whilst I was reviewing the *Collective Voices* responses. This was discussed in section 5.3.7 but remains a silence not addressed by this study. Alleviating this situation could enhance communication, enabling staff to support smoother transition between different parts of the healthcare system and prevent patients experiencing gaps in services.

Whilst exploring the impact of isolated fragility hip fracture in young people on those close to them was not the aim of this study, it emerged as a key aspect of the recovery experience. The findings indicate the impact on family, carers and others in the participants' social networks was often marked. This not only

encompassed practical but also psychological and relationship issues and was contextual, linked to the finding that young hip fracture patients often lived alone and they or their carers had other responsibilities. As a result, there appears to be a possible silence in the literature and healthcare provision regarding impact on those close to the young hip fracture patient that has been identified but not addressed by this study.

The most striking way in which this study has altered the context of hip fracture care and the evidence base underpinning this, is that it appears to have prompted clinical researchers at the study site to opportunistically capture PROM data from the same population as part of the invitation process for the young hip fracture study. It is unlikely this would otherwise have been undertaken. Despite the limitations of the OHS and EQ-5D previously highlighted here, their early analysis (Coughlin et al, 2016) supports the findings of the young hip fracture study, reporting that young hip fracture patients appear to do less well as measured by these PROMs. This potentially provides the basis for a future study comparing the findings from these two very different data sets from the same participants. This could possibly inform future research with young hip fracture patients more generally and/or any future development of a PROM specifically designed for young people with isolated hip fracture following minor trauma.

4.10 Recommendations

Recommendations for further research, healthcare practice and policy resulting from the young hip fracture study are presented in the following three sections.

4.10.1 Recommendations for research

The findings from this study indicate a number of areas for further research.

- Test these findings with a larger sample to demonstrate the degree of transferability and help further expose the current silences surrounding fragility hip fracture in young adults.
- Undertake a comparative study using the findings from this study and the OHS and EQ-5D data Coughlin et al (2016) reported on from the same participants. This could provide a useful comparison of these two different approaches to outcomes assessment in young hip fracture patients. It may also help to inform any future development of new PROMs specific to these patients.
- Develop PROM(s) for fragility hip fracture in young adults. These should assess the long as well as short-term impact of the injury and encompass an holistic assessment of physical, psychological and sociological impact.
- Undertake an economic evaluation of the impact of fragility hip fracture in young adults.
- Investigate the potential relationship between endocrine or metabolic abnormalities in patients with normal bone mineral density to inform future

screening and primary prevention strategies aimed at reducing fragility hip fracture in otherwise apparently healthy, young people.

- Explore the impact of fragility hip fracture in young adults on their families/carers and the members of their social networks. This should include their ability to support recovery.
- Explore the potential of in-depth interviews for therapeutic effect on individuals who have suffered low velocity trauma.
- Test The Silences Framework with other client groups who are not commonly associated with marginalisation or under-representation to determine the real potential of this new research tool.

4.10.2 Recommendations for healthcare practice

- Review of the care pathway approach to the care of young fragility hip fracture patients and its appropriateness for this client group who do not fit the accepted norms in terms of age at injury, route to hospital, recovery trajectory and rehabilitation needs.
- Review access to and models of provision for post discharge rehabilitation/physiotherapy for young isolated hip fracture patients.
- Improve communication and the quality of information given to young hip fracture patients ensuring they understand the implications of the information provided.

- Improve healthcare staff knowledge of the hip fracture patient journey as a whole.

4.10.3 Recommendations for policy

- Review the scope of the National Hip Fracture Database for England, Wales, Northern Ireland and the Channel Islands to include the under 60s. This would bring it more in-line with other nations in terms of hip fracture surveillance and enable further research to inform future service provision and decision-making.
- Review the provision of rehabilitation and physiotherapy for young fragility hip fracture patients i.e. availability, access and funding
- Review the accident reporting requirements of relevant agencies e.g. police, government transport and local authorities, NHS England and ambulance trusts to explore how accidents resulting in serious but not multiple or head injuries and not involving other road users can be more effectively recorded.

4.11 Conclusion

The aim of this study was to ‘give voice’ to the recovery experiences of young adults following an isolated hip fracture resulting from a minor fall guided by a new research tool. The specific objectives associated with this aim were to:

1. explore and articulate the experiences of young adults following an isolated hip fracture resulting from a minor fall using a new research tool, The Silences Framework (Serrant-Green, 2011);
2. assess the effectiveness and appropriateness of healthcare delivery for these individuals;
3. identify the implications of (1) and (2) above for service improvement and care practice;
4. test The Silences Framework (Serrant-Green, 2011), for researching sensitive issues or the health care needs of marginalised or under-represented groups, in a new context.

The study achieved this aim and in doing so has realised the potential gains identified in Chapter 1 section 1.4. It therefore makes a unique contribution to the body of knowledge in three ways. First, it has contributed to silences research by exploring the current gap in the body of knowledge regarding the experiences of young adults with fragility hip fracture. To achieve this it has re-conceptualised young adults with fragility hip fracture as inadvertently silenced and largely missing from the dominant hip fracture discourses in the academic literature, healthcare practice and policy.

Second, an interpretive criticalist philosophy, minimally structured, in-depth interviews and an inductive, cyclical approach to data analysis have been used to 'give voice' to this group by eliciting, interpreting and presenting the situated views

of thirty individuals with experience of this injury. In doing so this study provides the first retrospective exploration of the impact of isolated hip fracture in young adults. Service user perspectives underpinned the study throughout in the form of a patient critical friend to the study and the findings were verified and guided by study participants and members of the social networks associated with hip fracture care they identified as important. Based on the study findings, the appropriateness of current care delivery for the target population has been appraised and recommendations made for future research, healthcare practice and policy to enhance future care for this client group. Thus, the 'Screaming Silences' associated with the injury and recovery experiences of young fragility hip fracture patients have been identified and explored. This includes silences that have changed, remained the same or been identified for the first time in recognition that undertaking this study will have had an effect on the context it sought to explore.

Finally, the study has tested The Silences Framework (Serrant-Green, 2011) in this novel setting and found it to be wholly appropriate for guiding a patient-experience based, acute orthopaedic/rehabilitation study undertaken by a student researcher. Some minor suggestions have been made for others contemplating using this new research tool in future. These conclusions are based on researcher reflection on its use and the research process it guided.

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Appendices

APPENDIX 1: Interview Guide

Interview Guide

Thank you for agreeing to speak to me today.

I'm interested in your experiences of breaking your hip and your recovery since. My aim is to enable you to talk about whatever you want to with regard to your accident and recovery – therefore I will mainly listen to your story, but as we go along I may ask questions for clarification or summarise what you have said to check that I correctly understand what you mean.

If at any time you want to take a break or stop the interview please just say so. Is everything clear? Do you have any questions?....*[answer as required]*
Ok so where would you like to begin ...

Sample follow up/probing/clarification questions:

Is there any more you want to say about.....?

That seems important to you

Why was that important to you?

What was the significance of for you?

What difference, if any, has this made to your usual activities?

What effect if any, has this had on your relationships?

Sample process informed consent prompts to be used periodically during the interview:

Are you ok/happy to continue?

Closing

We are coming to the end of our time together. Is there anything else you would like to add before we finish?

Before we close I would like to summarise what I have understood from what you have said, to ensure I have understood what you meant to say. Is that ok? *[share summary]*

Thank you very much for your time. If you have any queries or need to contact me for any reason after today please use the contact details on the participant information sheet *[give details again if need be]*.

APPENDIX 2: Invitation Letter

Gillian Janes
PhD Student
School of Health and Social Care
Teesside University
Middlesbrough
TS1 3BA
Tel: +44(0)01642 384902
Email: G.Janes@tees.ac.uk

Participant Invitation Letter

Study No: 138830/140R002

Study Title: The recovery experiences of young adults following a fractured neck of femur

Dear *[add name with appropriate title]*

Your details have been identified from a search on the Nottingham Hip Fracture Database. I am writing to you as a PhD Student of the Centre for Health and Social Care Improvement [CHSCI] at the School of Health and Wellbeing, the University of Wolverhampton, to request your participation in a research project. I am seeking to ask about the individual injury and recovery stories of younger people who have experienced a broken hip and would welcome your participation. The research will be closely supervised by experienced researchers Professors Laura Serrant-Green and Magi Sque from the University of Wolverhampton.

The aims of the research are detailed in the enclosed Participant Information Sheet and I would be grateful if you would read this information before deciding whether you would be willing to participate in this research. The Information Sheet also outlines what your role in the research would be, if you agree to participate.

So I am aware of your decision regarding participation in this study, please could you fill in and return the Reply Slip, either in the stamped, addressed envelope enclosed, or by email, within the next 10 days. On receiving your response, I will contact you to make the necessary arrangements.

I am happy to talk with you, to answer any questions you might have, before you make up your mind. My contact details are at the top of this letter.

Thank you for taking the time to read this letter.
Kind regards



Gillian Janes

APPENDIX 3: Participant Information Sheet

Participant Information Sheet

Study No: 138830/140R002

Study Title: The recovery experiences of young adults following a fractured neck of femur.

Dear *insert name/title*

I would like to invite you to participate in the above research which is part of my PhD studies at the University of Wolverhampton. Before you decide I would like you to understand why the research is being done and what it would involve for you. I will go through this information sheet with you and answer any questions you have. This will take approximately 10minutes. The study aims to understand the experiences of younger, otherwise healthy people as they recover from a broken hip. This will help to determine any specific recovery needs this group may have and the healthcare services and support that best enable their recovery. This information can then be used to inform and influence future healthcare provision.

This information sheet explains the purposes of the study, why I am asking you to take part and what is involved.

Please read the letter, discuss it with others if you wish, and take time to decide whether or not you want to take part. I will be very happy to explain anything that is not clear.

What is the purpose of the study?

The study aims to explore the recovery experiences of healthy adults who suffered a fractured hip, often resulting from a simple fall, between the ages of 18 and 60years. This is an injury that is relatively unusual in this age-group therefore by learning about your experiences of recovery I hope to find out more about how best to enable maximum recovery and how healthcare services can best meet the needs of this group.

Who is running the study?

The research project is being carried out by myself, Gillian Janes. I am a PhD student. The study will be supervised by an experienced research team throughout. The main research supervisor (Director of Studies) is Professor Laura Serrant-Green.

Why have I been chosen for this study?

You have been chosen to take part in this study because you broke your hip at a relatively young age. In addition, you do not have any other known health conditions that could have increased your risk of this injury. Therefore, by sharing your story you could help us to further understand your experiences of recovery and how health and social care services can best support others.

Do I have to take part?

No, it is your choice whether you would like to take part. You are under no obligation to do so. This is something you may wish to discuss with others close to you. If you agree to take part you can still withdraw at any time without giving a reason.

What would happen to me if I take part?

I am asking you to share your experiences of your injury and subsequent recovery. This would be achieved through an interview with me, Gillian Janes. The interview would be carried out at a time and place which is convenient for you and me. You would have a choice about whether the interview was carried out face-to-face or over the telephone. I would explain the study before starting the interview and you would have the opportunity to ask questions. You would be asked to sign a consent form to show that you have agreed to take part in the study and you would be given a copy to keep. If you choose a telephone interview, the consent form would be sent to you to sign before the interview takes place. The interview would be audio recorded to provide an accurate record of the experiences you share with me.

During the interview I will enable you to tell the story of your injury and recovery. This may include for example:

- The circumstances of your injury
- Your experiences of hospital care
- Your experiences of recovery after discharge from hospital.

The interview would be expected to last no longer than two hours. However, if you wish to take a break or to finish the interview at any point, you would only need to tell me and would not need to give a reason for stopping the interview.

Interviews and recalling what may be challenging experiences can be emotionally tiring. You may wish to have a family member or friend with you during the interview, or someone to talk to afterwards. I would be able to offer you contact details of local support organisations and discuss other means of support if you would find this helpful. If you would like your family doctor to be notified of your participation in the study, I will arrange this.

My details are given at the end of this information sheet should you wish to contact me after the interview has taken place.

Would my taking part in this study be kept confidential?

The study has the necessary ethical approval and anything you say would be treated as confidential. All information collected would be kept in the strictest confidence. You would be allocated a code which would be used as a unique identifier for all the information you have shared with me. The name/code master list would be kept securely, separate from the interview information and only accessible by me. Your name would not be recorded anywhere else and no individual would be identifiable from the published results.

What happens after the interview?

After the interview I will listen to and transcribe the audio-recording word for word. The transcription of the interview would then be analysed by me. The audio-

recording would be retained for a minimum of two years from the completion of the study in accordance with University of Wolverhampton regulations and then destroyed.

You will receive a thank you letter, which will include a short questionnaire in which you will have an opportunity to provide feedback about your experience of being involved in the study. You can receive a summary of the research at the completion of the study if you wish.

The findings of the study will be reported in the PhD thesis. They may also be used as part of other professional academic publications or conference presentations by me. You may be offered the opportunity to participate in these activities if you would like to do so although you would be under no obligation to do this.

What happens if I change my mind:

Ongoing consent will be assumed for the duration of the study unless the researcher is notified otherwise. However if at any time after agreeing to take part in the study you change your mind you can withdraw without giving a reason and any information about you collected up to then will be destroyed. Therefore, should you wish to withdraw at any point please contact me on 01642 384902 or G.Janes@tees.ac.uk clearly stating your name.

What if I have a complaint about any aspect of this study:

If you have a concern about any aspect of this study, you should raise this with me initially and I will do my best to answer your questions (Tel: 01642 384902). If you remain unhappy or would rather speak to somebody else because your complaint is about me, please contact:

Professor Laura Serrant-Green (Director of Studies)
Centre for Health and Social Care Improvement
School of Health and Wellbeing
University of Wolverhampton
Wolverhampton WV1 1DT, UK
Tel: +44(0)1902 518627
Email: L.Serrant-Green@wlv.ac.uk

If following this, your complaint remains unresolved to your satisfaction please contact:

Professor Linda Lang
Dean, School of Health and Wellbeing
MH024, Mary Seacole Building
University of Wolverhampton
Direct Dial: 01902 51 8624
Mobile: 07811 166 300 or 07812671872
Fax: 01902 51 8660
Email: L.Lang@wlv.ac.uk

Contact for further information:

If you would like to discuss anything or have further questions at any time, please contact me, Gillian Janes, using the contact details below.

**Thank you for taking the time to read this information.
This Information Sheet is for you to keep.**

Gillian Janes
PhD Student
School of Health and Social Care
Teesside University
Middlesbrough TS1 3BA, UK
Tel: +44(0) 01642 384902
Email: G.Janes@tees.ac.uk

Professor Laura Serrant-Green
(Director of Studies)
Centre for Health and Social Care
Improvement
School of Health and Wellbeing
University of Wolverhampton
Wolverhampton WV1 1DT, UK
Tel: +44(0)1902 518627
Email: L.Serrant-Green@wlv.ac.uk

APPENDIX 4: Reply Slip

Gillian Janes
PhD Student
School of Health and Social Care
Teesside University
Middlesbrough
TS1 3BA
Tel: +44(0)01642 384902
Email: G.Janes@tees.ac.uk

Reply Slip

Study No: 138830/140R002

Study Title: The recovery experiences of young adults following a fractured neck of femur

I am willing to talk to Gillian about my experiences in a face-to-face or telephone interview

Your name(s): Please print

Signature(s):

Your telephone contact number:

and/ or

Email address:

Best time to contact you and preferred contact method [e.g. Telephone or Email]?

.....:

Please return the completed form in the envelope provided or via email to G.Janes@tees.ac.uk or alternatively telephone Gillian on 01642 384902

APPENDIX 5: University Ethical Approval

Date: 21st October 2013

Gillian Janes
7 Cowley Close
Eaglescliffe
Stockton-on-Tees
TS16 0QY

Dear Gillian

Re: The recovery experiences of young adults following a fractured neck of femur

Submitted to the Faculty of Education, Health and Wellbeing Ethics Sub-Committee Board (Health Professions, Psychology & Social Care)

The Faculty Ethics Sub-Committee (Health Professions, Psychology & Social Care) met on 14th October 2013. Your project was considered and reviewed at this meeting.

On review your research proposal was passed and given approval (**Code 2 – Pass (Researcher/Supervisor to Monitor)**). You are free to begin your study contingent on addressing any minor amendments detailed below.

(Paragraph for students with supervisors only)

Supervisors must ensure the minor amendments have been completed prior to commencement of data collection.

We would like to wish you every success with the project.

Yours sincerely

H Paniagua

Dr. H. Paniagua PhD, MSc, BSc (Hons) Cert. Ed. RN RM
Chair – School Ethics Committee

D Chadwick

Dr. D. Chadwick PhD, MSc, BA (Hons). PGCE
Chair – School Ethics Committee

APPENDIX 6: NRES Ethical Approval

West of Scotland REC 5

Ground Floor - Tennent Building
Western Infirmary
38 Church Street
Glasgow
G11 6NT

Mrs Gillian Janes
School of Health and Social Care
Teesside University
Middlesbrough
TS1 3BA

Date 05 February 2014

Direct line 0141 211 2102
E-mail WoSREC5@ggc.scot.nhs.uk

Dear Mrs Janes

Study title: The Recovery experiences of young adults following a fractured neck of femur.
REC reference: 14/WS/0034
Protocol number: n/a
IRAS project ID: 138830

The Proportionate Review Sub-committee of the West of Scotland REC 5 reviewed the above application on 05 February 2014.

We plan to publish your research summary wording for the above study on the NRES website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to withhold permission to publish, please contact the Co-ordinator Mrs Sharon Macgregor, WoSREC5@ggc.scot.nhs.uk.

Ethical opinion

The Sub-Committee reviewed the above application and has no major issues with it. They did, however, agree that the range of exclusions (alcohol and osteoporosis) may limit the number of available participants more than the researchers expect. The exclusion of the subjects who have a "cause" for their hip fracture may dilute the message that the researchers are looking for, and may remove some of the groups with a "hidden voice" eg the alcoholics. This is a comment only and you don't need to take any action.

It was noted that the Participant Information sheet has been reproduced in full in the GP letter. As a suggestion only, you may wish to simplify the letter so that only appropriate information is included. This would also save on paper. If you do decide to do this, the document should be submitted to the Committee as an amendment.

On behalf of the Committee, the sub-committee gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation,

subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations.

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non clinical trials this is not currently mandatory.

If a sponsor wishes to contest the need for registration they should contact Catherine Blewett (catherineblewett@nhs.net), the HRA does not, however, expect exceptions to be made. Guidance on where to register is provided within IRAS.

1. It was noted that subjects may be more than 10 years post recovery and writing to tell them that they had a serious injury could have a negative impact. Therefore, in the Participant Information Sheet, in the "What is the purpose of this study?", the word "serious" in line two

should be removed.

2. In the Participant Invitation letter, an additional sentence should be added to the first paragraph stating "Your details have been identified from a search on the Nottingham Hip Fracture Database."
3. In the third line of the invitation letter, the Committee asked that the word "capture" is changed to "ask about..." as this is friendlier wording.

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The documents reviewed and approved were:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Evidence of insurance or indemnity		19 July 2013
GP/Consultant Information Sheets	1	27 January 2014
Interview Schedules/Topic Guides	1	27 January 2014
Investigator CV		11 October 2013
Letter from Sponsor		29 October 2013
Letter of invitation to participant	1	27 January 2014
Other: Reply Slip	1	27 January 2014
Other: Supervisor CV		14 October 2013
Other: University Ethics Committee Letter		21 October 2013
Participant Consent Form	1	27 January 2014
Participant Information Sheet	1	27 January 2014
Protocol	1	27 January 2014
REC application		27 January 2014

Membership of the Proportionate Review Sub-Committee

The members of the Sub-Committee who took part in the review are listed on the attached sheet.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.
information is available at National Research Ethics Service website > After Review

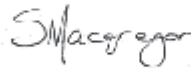
14/WS/0034

Please quote this number on all correspondence

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at <http://www.hra.nhs.uk/hra-training/>

With the Committee's best wishes for the success of this project.

Yours sincerely



for
Dr Stewart Campbell
Vice-Chair

Enclosures: List of names and professions of members who took part in the review
"After ethical review – guidance for researchers"

Copy to: Professor Laura Serrant-Green, University of Wolverhampton
Charlotte Davies, Nottingham University Hospitals NHS Trust

West of Scotland REC 5

Attendance at PRS Sub-Committee of the REC meeting on 05 February 2014

Committee Members:

<i>Name</i>	<i>Profession</i>	<i>Present</i>	<i>Notes</i>
Dr Stewart Campbell (VICE-CHAIR)	Consultant Physician & Gastroenterologist	Yes	
Dr James Curran	GP	Yes	
Mrs June Russell	Retired (Research Chemist)	Yes	

Also in attendance:

<i>Name</i>	<i>Position (or reason for attending)</i>
Dr Judith Godden	Scientific Officer/Manager
Mrs Sharon Macgregor	Co-ordinator

West of Scotland REC 5

Ground Floor - Tennent Building
Western Infirmary
38 Church Street
Glasgow
G11 6NT

Date 28 May 2014

Direct line 0141 211 2102
E-mail WoSREC5@ggc.scot.nhs.uk

Mrs Gillian Janes
School of Health and Social Care
Teesside University
Middlesbrough
TS1 3BA

Dear Mrs Janes

Study title: The Recovery experiences of young adults following a fractured neck of femur.
REC reference: 14/WS/0034
Protocol number: n/a
IRAS project ID: 138830

Thank you for your email of 18 May 2014. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 05 February 2014.

Documents received

The documents received were as follows:

Document	Version	Date
Letters of invitation to participant	2	18 May 2014
Participant information sheet (PIS)	2	18 May 2014

Approved documents

The final list of approved documentation for the study is therefore as follows:

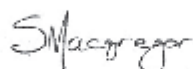
Document	Version	Date
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only)		19 July 2013
GP/consultant information sheets or letters	1	27 January 2014
Interview schedules or topic guides for participants	1	27 January 2014
Letter from sponsor		29 October 2013
Letters of invitation to participant	2	18 May 2014

Other [Reply Slip]	1	27 January 2014
Other [Supervisor CV]		14 October 2013
Other [University Ethics Committee Letter]		21 October 2013
Participant consent form	1	27 January 2014
Participant information sheet (PIS)	2	18 May 2014
REC Application Form		27 January 2014
Research protocol or project proposal	1	27 January 2014
Summary CV for Chief Investigator (CI)		11 October 2013

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

14/WS/0034	Please quote this number on all correspondence
-------------------	---

Yours sincerely



Mrs Sharon Macgregor
REC Manager

Copy to: Professor Laura Serrant-Green, University of Wolverhampton
Charlotte Davies, Nottingham University Hospitals NHS Trust

APPENDIX 7: NHS Trust Research and Innovation Approval

Letter of Agreement

Between

University of Wolverhampton
Centre for Health and Social Care Improvement

and

Study: The Young Hip Fracture Group (YHFG) Study V1**Ref: 14OY002**

WHEREAS the University of Wolverhampton (the University) is sponsoring the above study (referred to below as the Study), and Nottingham University Hospitals NHS Trust (the Trust) is the NHS Organisation carrying out the research.

This letter constitutes confirmation of an agreement between the University and the Trust concerning the study. The parties agree:

1. The University shall act as Sponsor within the UK for the Study under the Research Governance Framework for Health and Social Care, and The World Medical Association Declaration of Helsinki, entitled "Ethical Principles for Medical Research Involving Human Subjects".
2. The University shall use any data or other information provided by or derived from a Study Subject and provided by or on behalf of the Trust to the University in accordance with the consent provided by the Clinical Trial Subject.
3. The Trust shall ensure that the Study and related activities at the Trust are carried out in accordance with:
 - 3.1. the current version of the Protocol,
 - 3.2. the requirements of the Research Governance Framework for Health and Social Care
 - 3.3. the Data Protection Act 1998,
 - 3.4. the principles of Good Clinical Practice ("GCP"),
 - 3.5. The World Medical Association Declaration of Helsinki, entitled "Ethical Principles for Medical Research Involving Human Subjects".
4. The Trust shall ensure that adequate facilities and support are available for the proper performance of the Study at the Trust.
5. The Trust shall assist the University with any audits or monitoring if reasonably requested during normal office hours on reasonable notice.



We are here for you

Indemnities

6. The Trust shall indemnify the University against all demands claims losses or costs arising due to the negligent act or omission of the Trust or its employees, honorary employees, servants or agents in the course of or in connection with the Study.
7. As Sponsor the University is responsible for the general conduct of the study and shall indemnify the Trust against any claims arising from any negligent act or omission by the University in fulfilling the Sponsor role in respect of the Study.
8. No Party shall be liable to another in contract, tort, breach of statutory duty or otherwise for any loss of profits, revenue, reputation, business opportunity, contracts, or any indirect, consequential or economic loss arising directly or indirectly out of or in connection with this Agreement.

Confidentiality and data protection

9. The Parties agree to adhere to the principles of medical confidentiality in relation to Study Subjects involved in the Study and to ensure that the confidentiality of all data generated by the use of human subjects in the course of the Study is fully maintained.
10. The University shall not disclose the identity of Study Subjects to third parties without prior written consent of the Study Subject in accordance with the requirements of Data Protection Act 1998 and the principles set out in the Report of the Caldicott Guidelines on the review of the patient identifiable information dated December 1997.
11. Parties to this Agreement which are subject to the FOIA or the FOI(S)A and which receive a request under FOIA or FOI(S)A to disclose any information that belongs to another Party shall notify and consult that Party, as soon as reasonably practicable, and in any event, not later than five working days after receiving the request.
12. The Parties acknowledge and agree that the decision on whether any exemption applies to a request for disclosure of recorded information under FOIA or FOI(S)A is a decision solely for the Party responding to the request.
13. Where the Party responding to an FOIA or FOI(S)A request determines that it will disclose information it will notify the other Party in writing, giving at least two working days notice of its intended disclosure.

SIGNED ON BEHALF OF THE UNIVERSITY OF WOLVERHAMPTON

Professor Laura Serrant Director of CHSCI  13/03/14

SIGNED ON BEHALF OF NOTTINGHAM UNIVERSITY HOSPITALS NHS TRUST

Dr Maria Koufali Deputy Director R&I
Signature Date

We are here for you



Mrs Gillian Janes
Teeside University
School of Health and Social Care
Middlesbrough

TS1 3BA

30th May 2014

Dear Mrs Gillian Janes

Re 14OR002

Rec 14/WS/0034

CSP

The recovery experiences of young adults following a fracture neck of femur

The R&I Department have considered the following documents submitted on 19/05/14S and there is no objection from the NUH R&I Office to the implementation of this amendment. The documents reviewed are detailed below:

- Participant information Sheet v 2 dated 16 May 2014
- Letters of Invitation to participant v2 dated 16 May 2014

The amendment may therefore be implemented immediately at this site under the conditions of the existing NHS Permission.

Please note that you may only implement changes that were described in the documents listed above.

Yours sincerely,



We are here for you



Dr Brian Thomson / Dr Maria Koufali
Director of R&D / Deputy Director Research and Innovation



We are here for you

APPENDIX 8: Consent Form

Centre Number:
Study Number:
Patient Identification Number for this study:

CONSENT FORM

Title of Project: The recovery experiences of young adults following a fractured neck of femur

Name of Researcher: Gillian Janes

Please initial all boxes

1. I confirm that I have read and understand the information sheet dated **[DATE] [VERSION NUMBER]** for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.

☐

3. I consent to the use of audio recording, with possible use of anonymised verbatim quotation.

☐

4. I would like my GP to be informed of my participation in the study.

☐

5. I agree to take part in the above study.

☐

Name of Participant

Date

Signature

Name of Person
taking consent.

Date

Signature

APPENDIX 9: Secondary Screening Proforma

Secondary screening proforma

YHFG study recruitment

Responder No:

Study identifier:

Date Screening:

Cause of injury:

Age at injury:

Outcome:

Type interview:

Actions:

Additional info:

Interview checklist

Outstanding questions?

Consent check Y/N

GP letter Y/N

GP address:

Interview

Background questions:

Alcohol

Smoking

Other conditions/increased fracture risk

Self-help

Summary:

Final Report Y/N

Address:

APPENDIX 10: GP Information Letter

Gillian Janes
PhD Student
School of Health and Social Care
Teesside University
Borough Road
Middlesbrough
TS1 3BA
Tel: +44(0)01642 384902
Email: G.Janes@tees.ac.uk

GP Participant Information Letter

Study No: 138830/140R002

Study Title: The recovery experiences of young adults following a fractured neck of femur

Dear Dr (name)

Your patient, (name) has been invited and has agreed to take part in the above research study. They have consented to us informing you of their decision. In order for you to understand why the research is being done and what it would involve, we would like to ask you to read the following information which has been provided to your patient.

Dear *insert name/title*

I would like to invite you to participate in the above research which is part of my PhD studies at the University of Wolverhampton. Before you decide I would like you to understand why the research is being done and what it would involve for you. I will go through this information sheet with you and answer any questions you have. This will take approximately 10minutes. The study aims to understand the experiences of younger, otherwise healthy people as they recover from a broken hip. This will help to determine any specific recovery needs this group may have and the healthcare services and support that best enable maximum recovery. This information can then be used to inform and influence future healthcare provision.

This information sheet explains the purposes of the study, why I am asking you to take part and what is involved.

Please read the letter, discuss it with others if you wish, and take time to decide whether or not you want to take part. I will be very happy to explain anything that is not clear.

What is the purpose of the study?

The study aims to explore the recovery experiences of healthy, adults who suffered a fractured hip, often resulting from a simple fall, between the ages of 18 and 60years. This is a serious injury that is relatively unusual in this age-group therefore by learning about your experiences of recovery I hope to find out more about how best to enable recovery and how healthcare services can best meet the needs of this group.

Who is running the study?

The research project is being carried out by myself, Gillian Janes. I am a PhD student. The study will be supervised by an experienced research team throughout. The main research supervisor (Director of Studies) is Professor Laura Serrant-Green.

Why have I been chosen for this study?

You have been chosen to take part in this study because you broke your hip at a relatively young age. In addition, you do not have any other known health conditions that could have increased your risk of this injury. Therefore, by sharing your story you could help us to further understand your experiences of recovery and how health and social care services can best support others.

Do I have to take part?

No, it is your choice whether you would like to take part. You are under no obligation to do so. This is something you may wish to discuss with others close to you. If you agree to take part you can still withdraw at any time without giving a reason.

What would happen to me if I take part?

I am asking you to share your experiences of your injury and subsequent recovery. This would be achieved through an interview with me, Gillian Janes. The interview would be carried out at a time and place which is convenient for you and me. You would have a choice about whether the interview was carried out face-to-face or over the telephone. I would explain the study before starting the interview and you would have the opportunity to ask questions. You would be asked to sign a consent form to show that you have agreed to take part in the study and you would be given a copy to keep. If you choose a telephone interview, the consent form would be sent to you to sign before the interview takes place. The interview would be audio recorded to provide an accurate record of the experiences you share with me.

During the interview I will enable you to tell the story of your injury and recovery. This may include for example:

- The circumstances of your injury
- Your experiences of hospital care
- Your experiences of recovery after discharge from hospital.

The interview would be expected to last no longer than two hours. However, if you wish to take a break or to finish the interview at any point, you would only need to tell me and would not need to give a reason for stopping the interview.

Interviews and recalling what may be challenging experiences can be emotionally tiring. You may wish to have a family member or friend with you during the interview, or someone to talk to afterwards. I would be able to offer you contact details of local support organisations and discuss other means of support if you would find this helpful. If you would like your family doctor to be notified of your participation in the study, I will arrange this.

My details are given at the end of this information sheet should you wish to contact me after the interview has taken place.

Would my taking part in this study be kept confidential?

The study has the necessary ethical approval and anything you say would be treated as confidential. All information collected would be kept in the strictest confidence. You would be allocated a code which would be used as a unique identifier for all the information you have shared with me. The name/code master list would be kept securely, separate from the interview information and only accessible by me. Your name would not be recorded anywhere else and no individual would be identifiable from the published results.

What happens after the interview?

After the interview I will listen to and transcribe the audio-recording word for word. The transcription of the interview would then be analysed by me. The audio-recording would be retained for a minimum of two years from the completion of the study in accordance with University of Wolverhampton regulations and then destroyed.

You will receive a thank you letter, which will include a short questionnaire in which you will have an opportunity to provide feedback about your experience of being involved in the study. You can receive a summary of the research at the completion of the study if you wish.

The findings of the study will be reported in the PhD thesis. They may also be used as part of other professional academic publications or conference presentations by me. You may be offered the opportunity to participate in these activities if you would like to do so although you would be under no obligation to do this.

What happens if I change my mind?

Ongoing consent will be assumed for the duration of the study unless the researcher is notified otherwise. However if at any time after agreeing to take part in the study you change your mind you can withdraw without giving a reason and any information about you collected up to then will be destroyed. Therefore, should you wish to withdraw at any point please contact me on 01642 384902 or G.Janes@tees.ac.uk clearly stating your name.

What if I have a complaint about any aspect of this study?

If you have a concern about any aspect of this study, you should raise this with me initially and I will do my best to answer your questions (Tel: 01642 384902). If you

remain unhappy or would rather speak to somebody else because your complaint is about me, please contact:

Professor Laura Serrant-Green (Director of Studies)
Centre for Health and Social Care Improvement
School of Health and Wellbeing
University of Wolverhampton
Wolverhampton WV1 1DT, UK
Tel: +44(0)1902 518627
Email: L.Serrant-Green@wlv.ac.uk

If following this, your complaint remains unresolved to your satisfaction please contact:

Professor Linda Lang
Dean, School of Health and Wellbeing
MH024, Mary Seacole Building
University of Wolverhampton
Direct Dial: 01902 51 8624
Mobile: 07811 166 300 or 07812671872
Fax: 01902 51 8660
Email: L.Lang@wlv.ac.uk

Contact for further information:

If you would like to discuss anything or have further questions at any time, please contact me, Gillian Janes, using the contact details below.

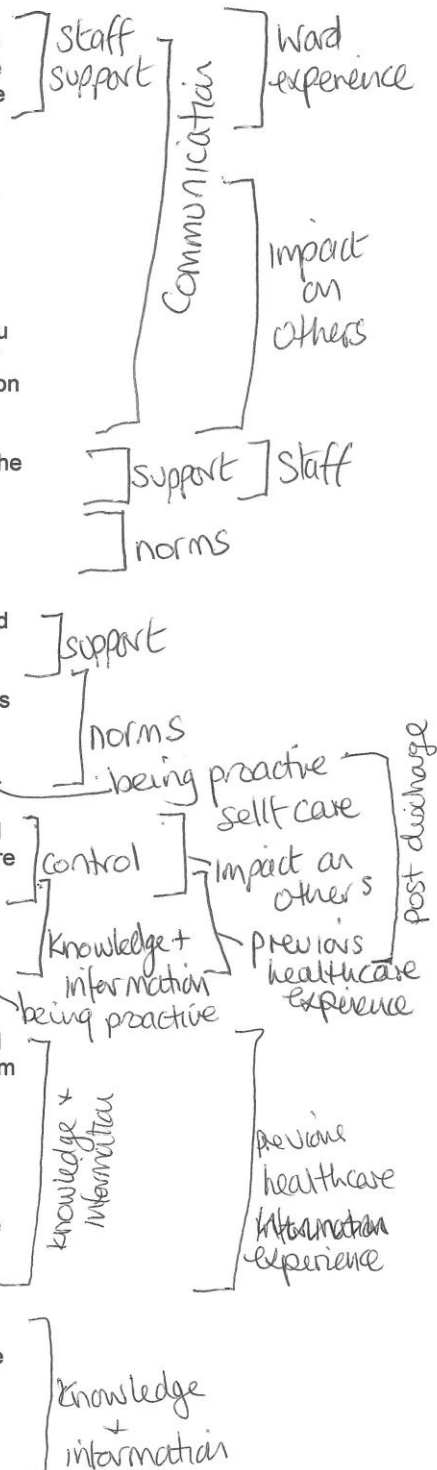
**Thank you for taking the time to read this information.
This Information Sheet is for you to keep.**

Gillian Janes
PhD Student
School of Health and Social Care
Teesside University
Middlesbrough TS1 3BA, UK
Tel: +44(0) 01642 384902
Email: G.Janes@tees.ac.uk

Professor L Serrant-Green (Director of Studies)
Centre for Health and Social Care Improvement
School of Health and Wellbeing
University of Wolverhampton
Wolverhampton WV1 1DT, UK
Tel: +44(0)1902 518627
Email: L.Serrant-Green@wlv.ac.uk

APPENDIX 11: Interview transcript excerpt with initial coding

286 LS so that was I think her attitude em...but to be fair she
 287 did actually come down and sort of say well how can we
 288 get you home when I was explaining well you know I live
 289 on my own
 290 GJ right
 291 LS em...you know how am I supposed to look after
 292 myself...you know I'm trying to arrange to move into my
 293 parents em...to look after me cos I can't...you know y
 294 GJ hmm
 295 LS you can't carry anything lift anything...
 296 GJ hmmm
 297 LS em...you can't even shower yourself properly em...you
 298 can't even bend your knee so you can't even get to your
 299 foot you can't even dry your foot never mind put a sock on
 300 it (laughs)
 301 GJ yeah
 302 LS was sort of trying to sort some things out for me so she
 303 was like gonna chase it up further to get me home
 304 earlier...I think it's just the awareness stuff again...when
 305 you're elderly they think about your social situation a bit
 306 more
 307 GJ right
 308 LS em...and like they might get you the different aids and
 309 like a trolley and stuff so you can get your meal and a
 310 drink to your dining room table so you can sit down and
 311 eat and things like that but I think a younger person that's
 312 not considered in quite the same way
 313 GJ right
 314 LS em...and I felt you had to ask for a lot of stuff
 315 GJ right
 316 LS em...sort of thing I know I'm going to my parents but I
 317 don't wanna be there too long...and you know once you're
 318 out it's very hard...to then...get reassessed if you need
 319 things (laughs)
 320 GJ right
 321 LS so in my mind it was trying to get everything sorted
 322 before I could come home
 323 GJ right
 324 LS em...again that's possibly because of my background
 325 knowing....perhaps a little bit about how the health system
 326 works (laughs)
 327 GJ right
 328 LS em...
 329 GJ so do you feel sorry....do you feel you used that
 330 background knowledge
 331 LS yeah..I feel that somebody else would just have gone
 332 great I've got crutches and got home and then struggled
 333 (laughs)
 334 GJ right
 335 LS em...cos I mean for example I know I had a friend
 336 who's had an infection in both his hip and he had to have
 337 2 Birmingham hip resurfacings...and he was just sent
 338 home with crutches and he was saying oh it's really
 339 difficult you make a cup of tea and then go...hand on a
 340 minute how am I going to get that into the living room



APPENDIX 12: Initial findings summary

Initial findings summary

The recovery experiences of young adults following a fractured neck of femur.
Ref:138830/140R002

Initial themes for study participant verification/comment

Four main themes emerged from the study:

- Experience of care
- Impact on self
- Support mechanisms and impact on others
- Moving forward

A summary of the findings in each theme is provided below:

1. Experience of care

People talked about what had caused the injury and the events leading up to hospital admission. Experiences of care in A&E, the ward and after discharge ranged from '*appalling*' to '*excellent*' and from receiving very personalised care to '*being processed*'. People also talked about how they were spoken to by staff and the information they were given. Some experienced clear and consistent communication but for others, mixed messages and insufficient information was part of their story. People also referred to other things that had happened in their lives and how these had affected their response to the injury. Being different to what others, and sometimes they themselves thought of as the usual age, symptoms and recovery needs for people with this type of injury was frequently part of the recovery experience.

Do you see your experiences of recovering from hip fracture reflected in theme 1?

Yes

No – if no, please briefly state why here:

2. Impact on self

People talked about experiencing a wide range of emotions following the accident. Shock, fear of falling again and reduced confidence were common responses to the accident, although not experienced by everyone. These often resulted in a different choice of footwear, which persisted for years. Making sense of the accident and recovery experiences and needing to come to terms with their new situation was frequently talked about. For some people this was relatively short term but for others took much longer. A positive approach to recovery was common with many people seeking out specific care, for example physiotherapy, for themselves. Some people talked about getting positive outcomes from a negative experience. Examples of this included positive lifestyle changes, coping

with complications and increased confidence. Information was frequently part of people's stories. For some this was seeking out specific information, for example regarding a particular treatment. However for others it was more about using their professional knowledge or other experiences of healthcare to support their own recovery. The sense of self-identity was another area people talked about. For some the injury resulted in just a temporary change in this or no change at all whilst other people experienced a long term change in self-sufficiency and how they were viewed by others around them. Work and financial issues were commonly talked about and included examples of positive and negative changes to careers, personal and family finances.

Do you see your experiences of recovering from hip fracture reflected in theme 2?

Yes

No – if no, please briefly state why here:

3. Support mechanisms and impact on others

People talked a lot about the support they received from family, friends, members of the public and professional staff. There were also examples of a lack of support. Similarly, the significant effect of the injury on family, friends and work colleagues was frequently mentioned, although for some people there was only temporary or no impact on others. Support from specific healthcare, bus and shop staff was highlighted by people although the quality of this was variable. The positive use of humour by family, friends and healthcare staff was highlighted as a very helpful means of support.

Do you see your experiences of recovering from hip fracture reflected in theme 3?

Yes

No – if no, please briefly state why here:

4. Moving forward

The injury resulted in no particular concerns for the future for some people. However others had concerns about falling again, wanting to protect loved ones from falling, work, compensation and finance issues which included how to afford major changes to living accommodation. In addition, the prospect of further surgery and risks associated with this when older, as well as continued striving for further physical recovery were of concern to people. Complications following surgery, continuing disability and the discovery of other long term health

conditions were described by some people whilst others reported no limitations or long term impact from the injury. Leisure activities were frequently mentioned. For some people their ability to participate was severely affected whilst for others there was no impact and some people had even taken up new activities as a result of the injury. For some people, taking part in the study, thinking and talking about their experiences enabled them to gain new insights on the injury and their recovery, having not had the opportunity to discuss it in this way before.

Do you see your experiences of recovering from hip fracture reflected in theme 4?

Yes

No – if no, please briefly state why here:

**APPENDIX 13: Silence Dialogue / Initial findings – participant review
invitation**



Dear study participant

Study No: 138830/140R002

Study Title: The recovery experiences of young adults following a fractured neck of femur

As promised, attached is a brief summary of the initial themes from the hip fracture research study you participated in. This is your opportunity to comment on whether or not your experience of recovery from hip fracture is reflected in these initial findings before the next stage of analysis. This should take no longer than 10 minutes.

The summary has been developed from what the 30 people interviewed during the study talked about. Please complete your responses to the questions in the 4 boxes and return to me by email or post in the enclosed stamped addressed envelope at the address below by 30th March 2015.

Thank you

Gillian

Gillian Janes

PhD student

School of Health and Social Care, Teesside University, Middlesbrough, TS1 3BA

Email: g.janes@tees.ac.uk

APPENDIX 14: Draft 1 findings summary

Draft 1 findings summary
(changes following participant review/Silence Dialogue underlined)

The recovery experiences of young adults following a fractured neck of femur.
Ref:138830/140R002

Draft 1 findings for 'collective voices' review

Four main themes emerged from the study:

1. Experience of care
2. Impact on self
3. Support mechanisms and impact on others
4. Moving forward

A summary of the findings in each theme is provided below:

1. Experience of care

People talked about what had caused the injury and the events leading up to hospital admission. Experiences of care in A&E, the ward and after discharge ranged from '*appalling*' to '*excellent*' and from receiving very personalised care to '*being processed*'. People also talked about how they were spoken to by staff and the information they were given. Some experienced clear and consistent communication but for others, mixed messages and insufficient information was part of their story. People also referred to other things that had happened in their lives and how these had affected their response to the injury. Being different to what others, and sometimes they themselves thought of as the usual age, symptoms and recovery needs for people with this type of injury was frequently part of the recovery experience.

Do you see your experiences of recovering from hip fracture reflected in theme 1?

Yes

No – if no, please briefly state why here:

2. Impact on self

People talked about experiencing a wide range of emotions following the accident. Shock, fear of falling again and reduced confidence were common responses to the accident, although not experienced by everyone. These often resulted in more awareness of where they were walking and a different choice of footwear, which persisted for years. Making sense of the accident and recovery experiences and needing to come to terms with their new situation was frequently talked about. For some people this was relatively short term but for others took much longer. A positive approach to recovery was common with many people seeking out specific care, for example physiotherapy, for themselves. Some people talked about getting positive outcomes from a negative experience. Examples of this included

positive lifestyle changes, coping with complications and increased confidence. Information was frequently part of people's stories. For some this was seeking out specific information, for example regarding a particular treatment. However for others it was more about using their professional knowledge or other experiences of healthcare to support their own recovery. The sense of self-identity was another area people talked about. For some the injury resulted in just a temporary change in this or no change at all whilst other people experienced a long term change in self-sufficiency and how they were viewed by others around them. Work and financial issues were commonly talked about and included examples of positive and negative changes to careers, personal and family finances.

Do you see your experiences of recovering from hip fracture reflected in theme 2?

Yes

No – if no, please briefly state why here:

3. Support mechanisms and impact on others

People talked a lot about the support they received from family, friends, members of the public and church and professional staff. There were also examples of a lack of support. Similarly, the significant effect of the injury on family, friends and work colleagues was frequently mentioned, although for some people there was only temporary or no impact on others. Support from specific healthcare, bus and shop staff was highlighted by people although the quality of this was variable. The positive use of humour by family, friends and healthcare staff was highlighted as a very helpful means of support. Lack of support for a wheelchair user was reported which resulted in hospital discharge being delayed.

Do you see your experiences of recovering from hip fracture reflected in theme 3?

Yes

No – if no, please briefly state why here:

4. Moving forward

The injury resulted in no particular concerns for the future for some people. However others had big concerns about falling again, wanting to protect loved ones from falling, work, compensation and finance issues which included how to afford major changes to living accommodation. Some people were aware of family concerns about them falling again. In addition, the prospect of further surgery and risks associated with this when older, as well as continued striving for further physical recovery were of concern to people. Complications following surgery,

continuing disability and the discovery of other long term health conditions were described by some people whilst others reported no limitations or long term impact from the injury. Leisure activities were frequently mentioned. For some people their ability to participate was severely affected whilst for others there was no impact and some people had even taken up new activities as a result of the injury. For some people, taking part in the study, thinking and talking about their experiences enabled them to gain new insights on the injury and their recovery, having not had the opportunity to discuss it in this way before.

Do you see your experiences of recovering from hip fracture reflected in theme 4?

Yes

No – if no, please briefly state why here:

**APPENDIX 15: Draft 1 findings – Collective voices / carer review
invitation**



Dear colleague

Study No: 138830/140R002

Study Title: The recovery experiences of young adults following a fractured neck of femur

We would welcome your comments on the attached summary of initial findings from the above research study. The purpose is to determine whether or not these findings reflect your experience of a partner, family member or friend recovering from a hip fracture following minor injury.

This should take no longer than a few minutes.

The study explores the recovery experiences of individuals aged between 30 and 60 years of age and study participants were between 1 and 10 years post injury. The summary has been developed from what the 30 people interviewed during the study talked about.

Please complete your responses to the questions in the 4 boxes and return to Jane Flewitt, PALS Co-ordinator, by [ADD DATE].

The study has the appropriate research ethics and Trust R&D approval. If you have any queries regarding the study please contact me using the email address below.

Thank you
Gillian

Gillian Janes
PhD student
School of Health and Social Care, Teesside University, Middlesbrough, TS1 3BA
Email: g.janes@tees.ac.uk

APPENDIX 16: Ambulance Trust Research Governance Approval

Ambulance Trust research governance approval



North East Ambulance Service **NHS**

NHS Foundation Trust

Research & Development Department
Ambulance Headquarters
Bernicia House
The Waterfront
Goldcrest Way
Newburn Riverside
Newcastle upon Tyne
NE15 8NY

Email: sonia.byers@neas.nhs.uk
Tel: 0191 430 2192
Fax: 0191 430 2082

28th April 2015
Ref: NEAS/2015/03

Dear Gillian Janes,

Re: The recovery experiences of young adults following a fractured neck of femur

I am pleased to inform you that your research has gained organisational support from North east Ambulance Service NHS Foundation Trust.

Having reviewed the study proposal and associated documents I am satisfied that there are no outstanding governance issues and therefore offer the full support of the Research & Development department.

If the R&D Department can be of any further assistance, please do not hesitate to contact us.

Yours Faithfully

A handwritten signature in black ink, appearing to be 'S Byers'.

Sonia Byers
R&D Manager

APPENDIX 17: Draft 2 findings summary

Draft 2 findings summary

(changes following Collective Voices review underlined)

The recovery experiences of young adults following a fractured neck of femur.
Ref:138830/140R002

Draft 2 Findings themes summary

Four main themes emerged from the study:

1. Experience of care
2. Impact on self
3. Support mechanisms and impact on others
4. Moving forward

A summary of the findings in each theme is provided below:

1. Experience of care

People talked about what had caused the injury and the events leading up to hospital admission. Experiences of care in A&E, the ward and after discharge ranged from '*appalling*' to '*excellent*' and from receiving very personalised care to '*being processed*'. There were examples of staff trying to alleviate the effects of previously poor care through their own interventions. The appropriateness of standardised care pathways for this group were questioned by some and there was a recognition of higher expectations of these individuals in terms of speed of recovery from staff. People also talked about how they were spoken to by staff and the information they were given. Some experienced clear and consistent communication but for others, mixed messages and insufficient information was part of their story. The frequency in which patients were seen or communicated with by the team was thought to impact on the quality of patient experience. People also referred to other things that had happened in their lives and how these had affected their response to the injury. Being different to what others, and sometimes they themselves thought of as the usual age, symptoms and recovery needs for people with this type of injury was frequently part of the recovery experience.

Do you see your experiences of recovering from hip fracture reflected in theme 1?

Yes

No – if no, please briefly state why here:

2. Impact on self

People talked about experiencing a wide range of emotions following the accident. Shock, fear of falling again and reduced confidence were common responses to the accident, although not experienced by everyone. These often resulted in more awareness of where they were walking and a different choice of footwear, which persisted for years. Making sense of the accident and recovery experiences and needing to come to terms with their new situation was frequently talked about. The specifically low velocity nature of the accident made it more difficult to come to rationalise for some people. For some people this was relatively short term but for others took much longer. A positive approach to recovery was common with many people seeking out specific care, for example physiotherapy, for themselves. The availability of limited support or follow up for these individuals was often a part of their recovery stories. Some people talked about getting positive outcomes from a negative experience. Examples of this included positive lifestyle changes, coping with complications and increased confidence. Information was frequently part of people's stories. For some this was seeking out specific information, for example regarding a particular treatment. However for others it was more about using their professional knowledge or other experiences of healthcare to support their own recovery. The sense of self-identity was another area people talked about. For some the injury resulted in just a temporary change in this or no change at all whilst other people experienced a long term change in self-sufficiency and how they were viewed by others around them. Some people thought the emotional needs of these individuals were not recognised or addressed. Work and financial issues were commonly talked about and included examples of positive and negative changes to careers, personal and family finances.

Do you see your experiences of recovering from hip fracture reflected in theme 2?

Yes

No – if no, please briefly state why here:

3. Support mechanisms and impact on others

People talked a lot about the support they received from family, friends, members of the public and church and professional staff. There were also examples of a lack of support and the other responsibilities family or friends of younger individuals may have which affects their ability to provide support. Similarly, the significant effect of the injury on family, friends and work colleagues was frequently mentioned and for some people the attitudes of those around them changed as their recovery took longer than expected. For other participants there was only temporary or no impact on others. Support from specific healthcare, bus and shop staff was highlighted by people although the quality of this was variable. The positive use of humour by family, friends and healthcare staff was highlighted as a very helpful means of support. Lack of equipment and support for wheelchair user was reported as part of a broader equipment supply issue which creates delayed hospital discharges.

Do you see your experiences of recovering from hip fracture reflected in theme 3?

Yes

No – if no, please briefly state why here:

4. Moving forward

The injury resulted in no particular concerns for the future for some people. However others had big concerns about falling again, wanting to protect loved ones from falling, work, compensation and finance issues which included how to afford major changes to living accommodation. Some people were aware of family concerns about them falling again. In addition, the prospect of further surgery and risks associated with this when older, as well as continued striving for further physical recovery were of concern to people. Complications following surgery, continuing disability, the discovery of other long term health conditions, the injury the cause of a worsening of a previous health condition or the development of others, such as Alzheimer's disease were described by some people. Others reported no limitations or long term impact from the injury. Leisure activities were frequently mentioned. For some people their ability to participate was severely affected whilst for others there was no impact and some people had even taken up new activities as a result of the injury. For some people, taking part in the study, thinking and talking about their experiences enabled them to gain new insights on the injury and their recovery, having not had the opportunity to discuss it in this way before.

Do you see your experiences of recovering from hip fracture reflected in theme 4?

Yes

No – if no, please briefly state why here:

APPENDIX 18: Collated responses – Silence Dialogue

Collated responses - Silence Dialogue (Participant review of initial findings themes summary)

Theme 1: Experience of care

- *Yes but this seems to cover all from the negative to positive. Although my experiences are covered.(DM)*
- *Yes as the comments are wide ranging and cover every eventuality (RB)*
- *Yes – I had excellent care and kindness from all staff at [hospital name removed]. Other things happening in my life could have been part of my accident. Bereavement in family etc health in general (FMc)*
- *Yes – I had very positive care during and for 2 years after my fall. All the time being fully informed at each stage of my recovery (HEW)*

Theme 2: Impact on self

- *Yes but overall I felt I had to ask a lot and as I am very independent this was difficult for me (DM)*
- *Yes, again it would be hard to say 'no' as the comments stretch across a continuum from nil to infinity (RB)*
- *Yes – fear of falling backwards again making sense of accident, different footwear (FMc)*
- *Yes – although I'm a very positive person I am more aware of how I walk and where I walk. Changing my footwear but losing some of my confidence (HEW).*

Theme 3: Support mechanisms and impact on others

- *Yes I do (DM)*
- *Yes, again how could one answer no as the comments go from 'a lot of support' to 'lack of support' and therefore must cover everyone (RB)*
- *Yes – I was given support from church members. Humour was very important. Healthcare staff supportive (FMc)*
- *Yes – the support I received from my husband and friends was fantastic. For weeks he did everything including emptying my commode. Luckily it was only urine so nothing sinister (HEW)*

Theme 4: Moving forward

- *Yes and falling again is a big issue for me (DM)*
- *Yes - again covers no concerns or lots of concern (RB)*
- *Yes – risks associated when older and discovery of osteoporosis (FMc)*
- *Yes – my husband is very concerned about me falling again. I try not to think about it, but only as I'm walking. In a lot of pain the last few weeks so I am going to try and sort out a fitness plan. (HEW)*

APPENDIX 19: Collated responses – Collective Voices

Collated responses - Collective Voices (carer and public review)

The recovery experiences of young adults following a fractured neck of femur.
Ref:138830/140R002

Initial themes for study collective voices verification/comment – responses

Orthogeriatric Nurse Practitioner/Osteoporosis Care

Junior doctors x2

Osteoporosis Lead Nurse

Staff Nurse orthopaedics

Radiographer

Physiotherapist

Paramedics x2

Relatives/carers x3 (PPI) responses

1. I have read through the document and it all looks pretty believable. My experience was as a carer for an active 79 year old. It doesn't match up with the report though, which is quite interesting in itself. A&E was great, but she then had to wait three whole days for the operation, in pain and not being allowed to eat anything. The recovery took two weeks in hospital, in a very unpleasant ward with some unsympathetic staff. At home, she received a short course of physio at the local centre and that was that. She lost her confidence, and never walked any distance again, or without a stick, although she could. To my mind, this was all a factor in developing Alzheimer's, although that's a very subjective view. She took on the whole experience with resignation that things would never really get better. Sadly, I was too wrapped up in other stuff to give her extra support. It's good to read some positive experiences in the summary.
2. It is a very good document and well thought out and set out and very understanding and clear to read over all a very good job well done. Even though some of the writing for someone one who as bad eye would be a bit small but I did not need to worry as had my magnify glass. But as I said it was a very good document. Tell who ever did the document to keep up the good work.
3. All of the above is totally understandable but there is something about the experience of care which does not seem to have been captured. With a hip fracture one is totally reliant at first on the care givers. Generally 30 – 60 year olds have the mind set of independence – being able to take care of ones' personal care needs, choose when to sleep, choose the food one wants to eat etc. It is hard to return to a state of dependence (theme 1); All of the above is correct but is there something to do with supporting attitudes changing over time? (theme 3); all of the above rings true, of course, but does focus on people. Did none of the respondents have animals? Is there also something about changed expectations and self-image which is not quite captured above? (theme 4)

Four main themes emerged from the study:

1. Experience of care

YES x2 (physiotherapist, paramedic)

- Every patient is different, and the amount they retain and take from the experience does depend on their outlook on the injury and how it will impair them. There are varying factors such as how much the team sees them and communicates to them. I imagine this would increase their satisfaction from their care (Junior Doctor)
- people always have experiences of both good and poor care, and NOF patients are no exception. Many have poor ward care and as such this often makes them reluctant to attend Hospital again, particularly for another orthopaedic event. (Paramedic)

NO

- I honestly can't answer yes to 'appalling' experiences by patients. If I felt someone was having this experience I would try to help them at the time. (Orthogeriatric NP)
- All of the above is totally understandable but there is something about the experience of care which does not seem to have been captured. With a hip fracture one is totally reliant at first on the care givers. Generally 30 – 60 year olds have the mind set of independence – being able to take care of ones' personal care needs, choose when to sleep, choose the food one wants to eat etc. It is hard to return to a state of dependence. (PPI 1)

General:

- I would treat them more like any young trauma patient, however the MOI/low velocity # would make alarm bells ring to look at pathological nature of # (SHO)
- Every pts experience is individual, appalling care should be addressed at the time. Lack of clear pathways for younger pts especially lack of understanding from junior medics (Osteoporosis Lead Nurse)
- I feel that when people attend ED they come in with a question mark above their head, because ED deals with such a wide range of patients there has to be certain pathways and processes to follow – the hip pathway I feel works very well however it's not perhaps the best pathway for younger hip # patients. I do feel that younger hip # pts are expected to recover and be up and mobile a lot quicker, as nurses we perhaps expect much more from this pt group (Staff Nurse orthopaedics)
- It would certainly raise an eyebrow to see a young NOF# patient and that may come across to the patient. Radiography is very much processing and we don't have a huge amount of time to give each patient (radiographer)

2. Impact on self

YES x4 (Orthogeriatric NP, physiotherapist, paramedic. PPI1)

- There are multiple variations here, but the active and working population understandably focus more on function: what they need to do and how this affects them. Those with more unhealthy lifestyles and those who could improve slightly do see it as positive on negative. I believe this is due to differing.....???incomplete (Junior Doctor)

- Many patients with a NOF go on to suffer in the future from poor mobility and other complications. In my experience just as many go on to have a good recovery with good mobility. Many patients do not change lifestyle and continue to be at risk of falling and injury etc. (paramedic)

NO

General:

- This has to be dependent on the individual, any low impact # affects confident irrelevant of age, the more velocity behind the injury the easier it is for people to rationalise (Junior Doctor)
- There is a definite lack of follow up for younger pts – specific goals need to be identified at the onset and monitored (Osteoporosis Lead Nurse)
- I've found that those with hip #s in the younger age bracket are very positive, keen to get back to their previous level of mobility and are extremely keen to get out of hospital as soon as possible. Those that I've cared for have wanted to face the challenge and have been very driven in reaching their goal. I will agree that most have talked about a private physio or alternative treatments etc and I can understand why (Staff Nurse orthopaedics)
- Again this is difficult as a lot of our care is just about surface chatter and gentle reassurance (radiographer)

3. Support mechanisms and impact on others

YES x3 (Orthogeriatric NP, physiotherapist, paramedic)

- I have found support from younger patients to be less than that of older ones, simply because they and their families live busy lives. Older patients seem to have friends and family who have more time, also they seem to be better settled into an area (Junior Doctor)

NO

- I have not had any involvement in this aspect of care (paramedic)
- All of the above is correct but is there something to do with supporting attitudes changing over time? (PPI1)

General:

- Wheelchair supply and preparations for discharge always take forever, it is an issue, but not one specific to the patient (Junior Doctor)
- There is a tendency for younger NOF#s to be expected to 'get up and go' and emotional needs are not addressed. Pts do need to be realistic in goals and pre-injury activity (Osteoporosis Lead Nurse)
- I've not dealt with many patients following hospital discharge so this is quite hard to answer. Whilst in-patients the younger pts seem to have big support networks of friends, work colleagues and family. They are always surrounded by visitors or off the ward with visitors but I'm unable to agree or disagree with the above theme in regards to support after discharge (Staff Nurse orthopaedics)
- Not indicated yes or no – may be yes looking at approach to filling in rest of the form but not certain (radiographer)

4. Moving forward

YES x3 (F1, physiotherapist, Orthogeriatric NP osteoporosis care)

- To a certain extent although some patients not realistic or honest with themselves as to their level of fitness/activity pre-injury. Physiotherapy has a definite role to play with outcomes/goals, falls prevention and confidence building (Osteoporosis Lead Nurse)
- I agree, lack of confidence and fear of a further fall is common for NOF patients. Many had OT Support but many have nothing. Complications and further disability are a concern also. Most people I have encountered have suffered significantly in terms of change in life style and daily ability. (paramedic)

NO

- I have not had any involvement in this aspect of care (paramedic)
- all of the above rings true, of course, but does focus on people. Did none of the respondents have animals? Is there also something about changed expectations and self-image which is not quite captured above? (PPI1)

General:

- Discussion around long term outcomes needs to happen from the beginning. Assuming f&w [*assumed fit and well*] we should f/u [*follow up*] at about 4-6 weeks (Junior Doctor)
- Again this is quite difficult to answer as I don't see the patients following discharge, however I do believe that the lack of confidence is a huge factor in moving forward. Many pts lacked confidence with a visible worry about tripping or falling and this certainly didn't help with their self-esteem but I feel it drove them even more to get back to 'normal' as quickly as possible. The financial side of things came up quite frequently, quite a few pts were concerned about their jobs and how they could afford to live but this was dependent on the employer etc (Staff Nurse orthopaedics)
- Not indicated yes or no – may be yes looking at approach to filling in rest of the form but not certain (radiographer)

APPENDIX 20: Sample collective voices response



Dear colleague

Study No: 138810/140802

Study Title: The recovery experiences of young adults following a fractured neck of femur

Your brief comments are sought on the attached summary of initial findings from the above qualitative study to determine whether or not they reflect your experience of the care of this patient group.

This should take no longer than a few minutes.

The study explores the recovery experiences of individuals aged between 30 and 60 years of age with a proximal hip fracture following minor trauma. Participants were between 1 and 12 years post injury. The summary has been developed from what the 30 people interviewed during the study talked about.

Please complete your responses to the questions in the 4 boxes and return to **Jess Highdingle**, Research Co-ordinator, Research Coordinator, Trauma and Orthopaedics, Queens Medical Centre by [ADD DATE].

The study has the appropriate research ethics and Trust R&D approval. If you any queries regarding the study please contact me using the email address below.

Thank you
Gillian

Gillian Jones
PhD student
School of Health and Social Care, Teesside University, Middlesbrough, TS1 3BA
Email : g.jones@tees.ac.uk

GJ/April 2015 R&D approved version

Please enter your job role here:

SLAO

The recovery experiences of young adults following a fractured neck of femur. Ref:131830/14CRU02
Initial themes for healthcare staff verification/comment

Four main themes emerged from the study:

1. Experience of care
2. Impact on self
3. Support mechanisms and impact on others
4. Moving forward

A summary of the findings in each theme is provided below:

1. Experience of care

People talked about what had caused the injury and the events leading up to hospital admission. Experiences of care in A&E, the ward and after discharge ranged from 'appalling' to 'excellent' and from receiving very personalised care to 'being processed'. People also talked about how they were spoken to by staff and the information they were given. Some experienced clear and consistent communication but for others, mixed messages and insufficient information was part of the story. People also referred to other things that had happened in their lives and how these had affected their response to the injury. Being different to what others, and sometimes they themselves thought of as the usual age, symptoms and recovery needs for people with this type of injury was frequently part of the recovery experience.

Do you see your experiences of younger hip fracture patient care reflected in theme 1?

Yes ~~the~~ I would treat them more like early young trauma patients, however they may have already got some anatomical nature of the.

2. Impact on self

People talked about experiencing a wide range of emotions following the accident. Shock, fear of falling again and reduced confidence were common responses to the accident, although not experienced by everyone. These often resulted in more awareness of where they were walking and a different choice of footwear, which persisted for years. Making sense of the accident and recovery experiences and needing to come to terms with their new situation was frequently talked about. For some people this was relatively short term but for others took much longer. A positive approach to recovery was common with many people seeking out specific care, for example physiotherapy, for themselves. Some people talked about getting positive outcomes from a negative experience. Examples of this included positive lifestyle changes, coping with complications and increased confidence. Information was frequently part of people's stories. For some this was seeking out specific information, for example regarding a particular treatment. However for others it was more about using their professional knowledge or other experiences of healthcare to support their own recovery. The sense of self-identity was another area people talked about. For some the injury resulted in just a temporary change in this or no change at all whilst other people experienced a long term change in self-sufficiency and how they were viewed by

others around them. Work and financial issues were commonly talked about and included examples of positive and negative changes to careers, personal and family finances.

Do you see your experiences of younger hip fracture patient care reflected in theme 2?

Yes *Theme 2 is very important on the individual level*
any less impact to affect confidence
 No - if no, please briefly state why here: *important to get the most velocity behind the injury the easier it is to people are maintain use.*

3. Support mechanisms and impact on others

People talked a lot about the support they received from family, friends, members of the public and clinical and professional staff. There were also examples of a lack of support. Similarly, the significant effect of the injury on family, friends and work colleagues was frequently mentioned, although for some people there was only temporary or no impact on others. Support from specific healthcare, bus and shop staff was highlighted by people although the quality of this was variable. The positive use of humour by family, friends and healthcare staff was highlighted as a very helpful means of support. Lack of support for a wheelchair user was reported which resulted in hospital discharge being delayed.

Do you see your experiences of younger hip fracture patient care reflected in theme 3?

Yes *Consciousness, supply & preparation for discharge relating to the recovery, it's an issue, how well and specific to the pt.*
 No - If no, please briefly state why here:

4. Moving forward

The injury resulted in no particular concerns for the future for some people. However others had big concerns about falling again, wanting to protect loved ones from falling, work, compensation and finance issues which included how to afford major changes to living accommodation. Some people were aware of family concerns about them falling again. In addition, the prospect of further surgery and risks associated with this when older, as well as continued striving for further physical recovery were of concern to people. Complications following surgery, continuing disability and the discovery of other long term health conditions were described by some people whilst others reported no limitations or long term impact from the injury. Leisure activities were frequently mentioned. For some people their ability to participate was severely affected whilst for others there was no impact and some people had even taken up new activities as a result of the injury. For some people, taking part in the survey, thinking and talking about their experiences enabled them to gain new insights on the injury and their recovery, having not had the opportunity to discuss it in this way before.

Do you see your experiences of younger hip fracture patient care reflected in theme 4?

Yes *Discussion around how best to manage need to happen from the beginning*
 No - If no, please briefly state why here: *Assessing ERM up should be @ 2-6 weeks*

APPENDIX 21: Study amendment (Collective Voices) approvals

Email confirmation – approval of amendment from University of

Wolverhampton

Hello Gillian

I am sorry for the misunderstanding, this does not need formal approval again. I will take chairs action on this as amendments to the existing research so please go ahead with your study. Louise would you make a note of this please for our records and also to mention at the next committee minutes?

Good luck with your further studies.

Kind Regards

Hilary

Dr Hilary Paniagua DNSci; Cert Ed (FE); Msc; BSc; NMC V300; SRN; SCM.

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Faculty of Education Health & Wellbeing

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Chair of RESULT www.wlv.ac.uk/RESULT

From: Janes, Gillian [mailto:G.Janes@tees.ac.uk]

Sent: 06 March 2015 19:17

To: Paniagua, Hilary (Dr)

Cc: Serrant, Laura; Sque, Magi

Subject: RE: request for ethical approval of addition to approved PhD study - The recovery experiences of young adults following fractured neck of femur

Dear Dr Paniagua

Re: The recovery experiences of young adults following a fractured neck of femur

I believe my Director of Studies, Prof. Laura Serrant, has spoken to you about the above study and she has advised me to contact you in your capacity as Chair of the relevant ethics committee with this request for approval of additional work.

The study was approved by the School Ethics Committee and the data collection phase is complete. I am now seeking to convene an advisory group, comprising volunteer healthcare professionals and service users with experience of caring for fractured neck of femur patients, to comment on the themes from the initial data analysis. These volunteers will be sought through existing research contacts and

asked to give their feedback on the initial themes by post, in person or via telephone at their convenience.

This additional work is to optimise the validity of my analysis and is in line with The Silences Framework which is the methodology guiding my study. These details are also set out in the attached letter for your records/convenience.

I am therefore seeking University approval for this additional work. Subject to this being granted, appropriate NHS R&D and REC approval for this addition will be sought.

I trust this is all the information you need and I will look forward to hearing from you.

Kindest regards

Gillian

Gillian Janes
PhD Student
FEHW
Tel: 01642 384902
Mob: 07745351412

Email confirmation - approval of amendment NHS Research Ethics

Committee

Dear Gillian,

I can confirm that, since your sponsor is satisfied that this is a minor amendment, there is no requirement to notify the REC of the change. This is stated in our Standard Operating Procedures (point 6.21).

I trust that this confirmation is acceptable to your Trust R&D.

Sharon
REC Co-ordinator/Manager
West of Scotland Research Ethics Service

Confirmation – approval of amendment NHS Trust



14th April 2015

Mrs Gillian Janes
Teeside University
School of Health and Social Care
Middlesbrough

TS1 3BA

Dear Mrs Gillian Janes

Short Title / Acronym	The Young Hip Fracture Group (YHFG) Study V1 /
CSP Number	
R&I REF	14OR002
Long Title	The recovery experiences of young adults following a fracture neck of femur
PROJECT MILESTONES	
Recruitment Target	
Date of Valid Submission	31/03/2014
Recruitment End Date	

The R&I Department have considered the following documents submitted on 02/04/15 and there is no objection from the NUH R&I Office to the implementation of this amendment. The documents reviewed are detailed below:

- Addition data analysis required to the phase of the above study. Researcher seeking access to volunteers and Healthcare Professionals with experience of caring for fractured neck of femur patients.

The amendment may therefore be implemented immediately at this site under the conditions of the existing NHS





Permission.

Please note that you may only implement changes that were described in the documents listed above.

Yours sincerely,

Dr Brian Thomson / Dr Maria Koufali
Director of R&D / Deputy Director Research and Innovation



We are here for you